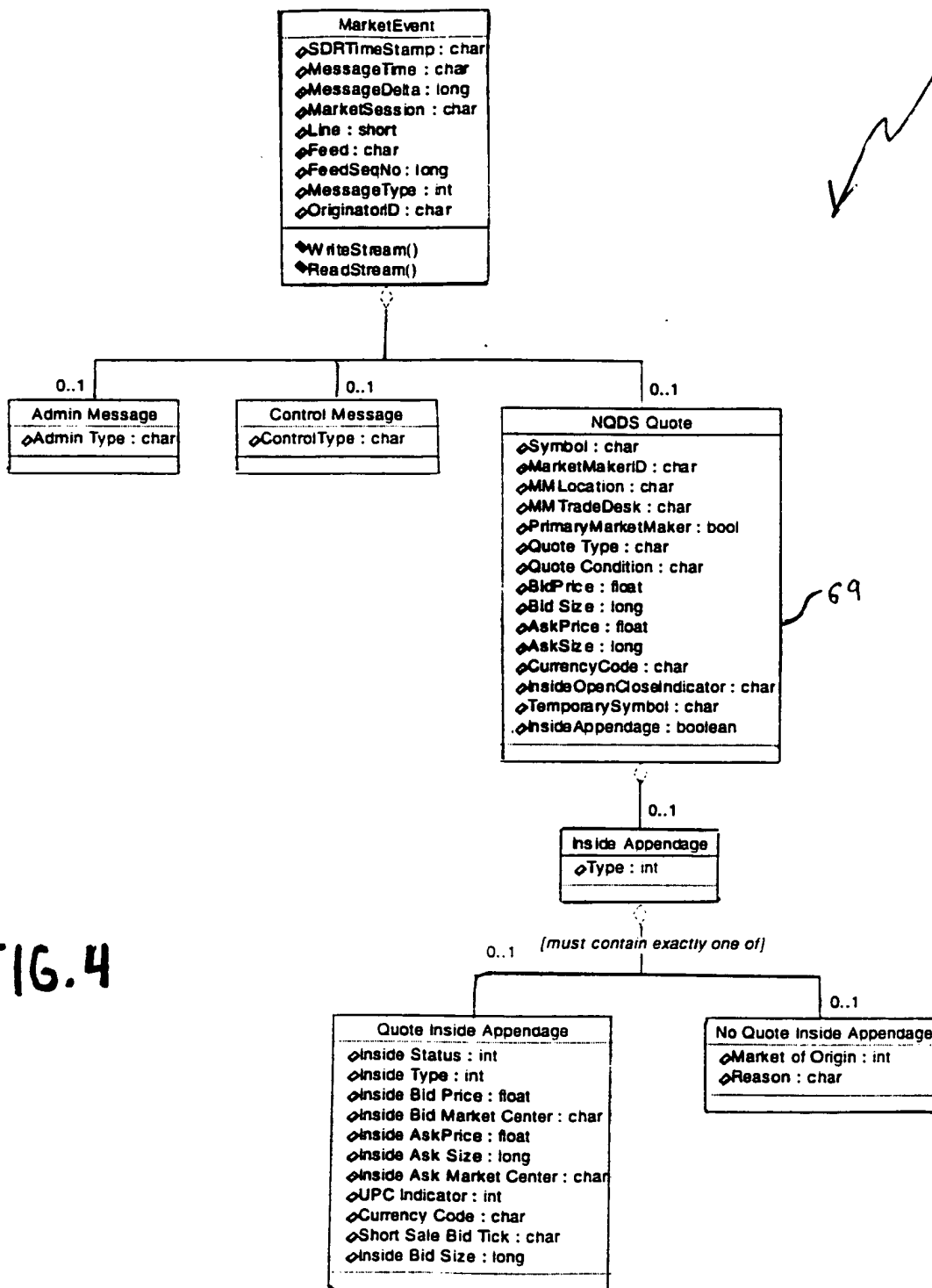
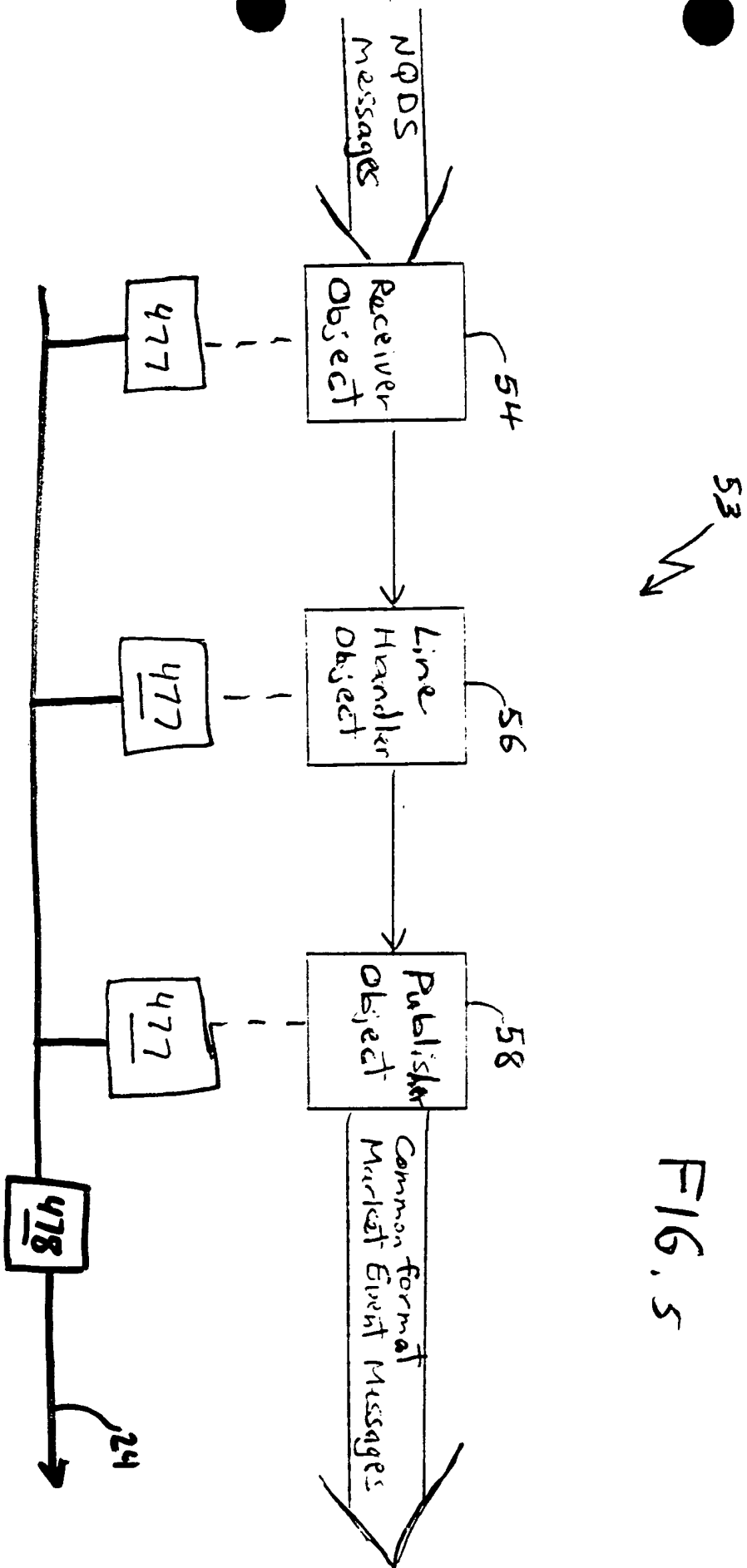


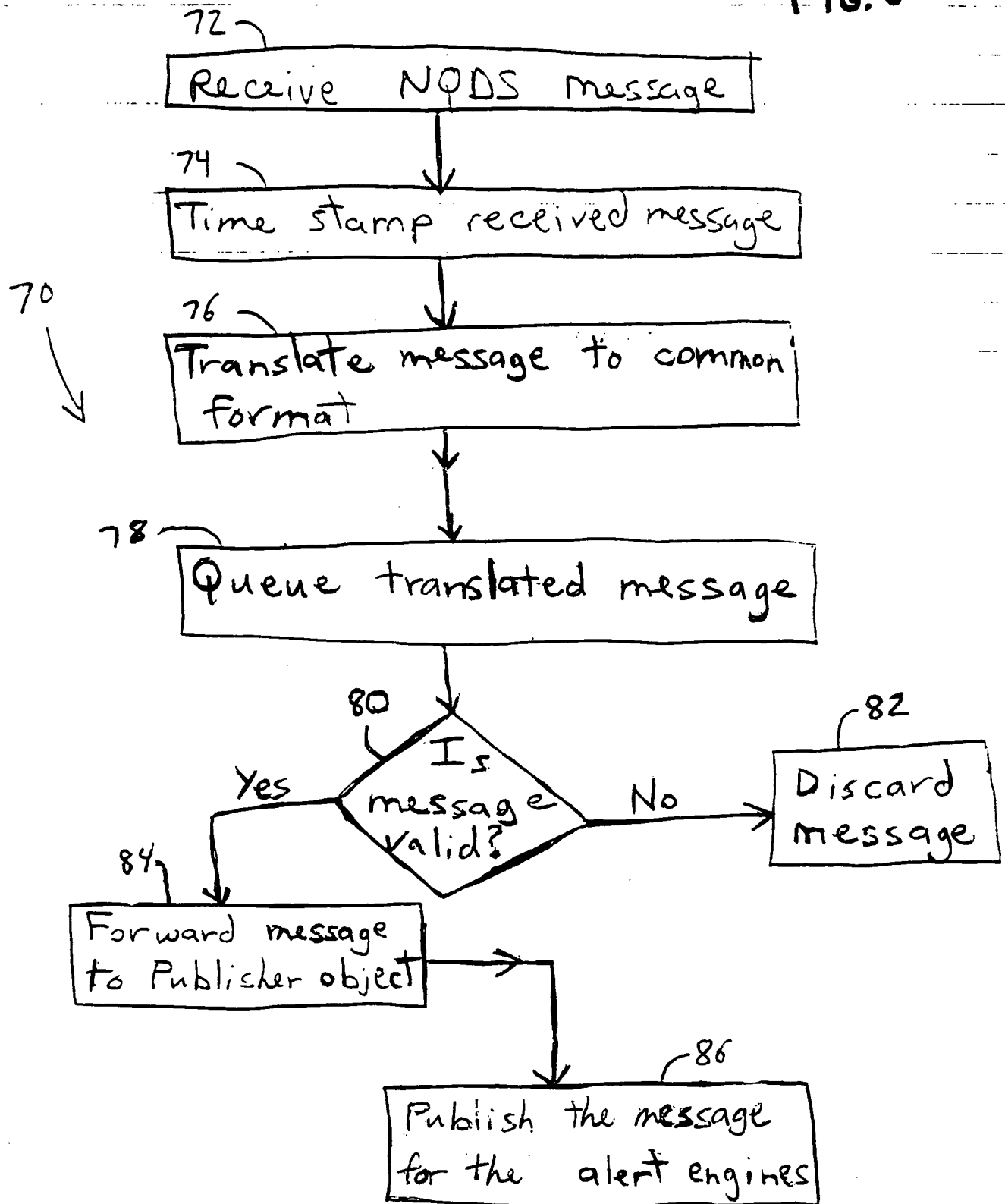
FIG 3





F16.5

FIG. 6



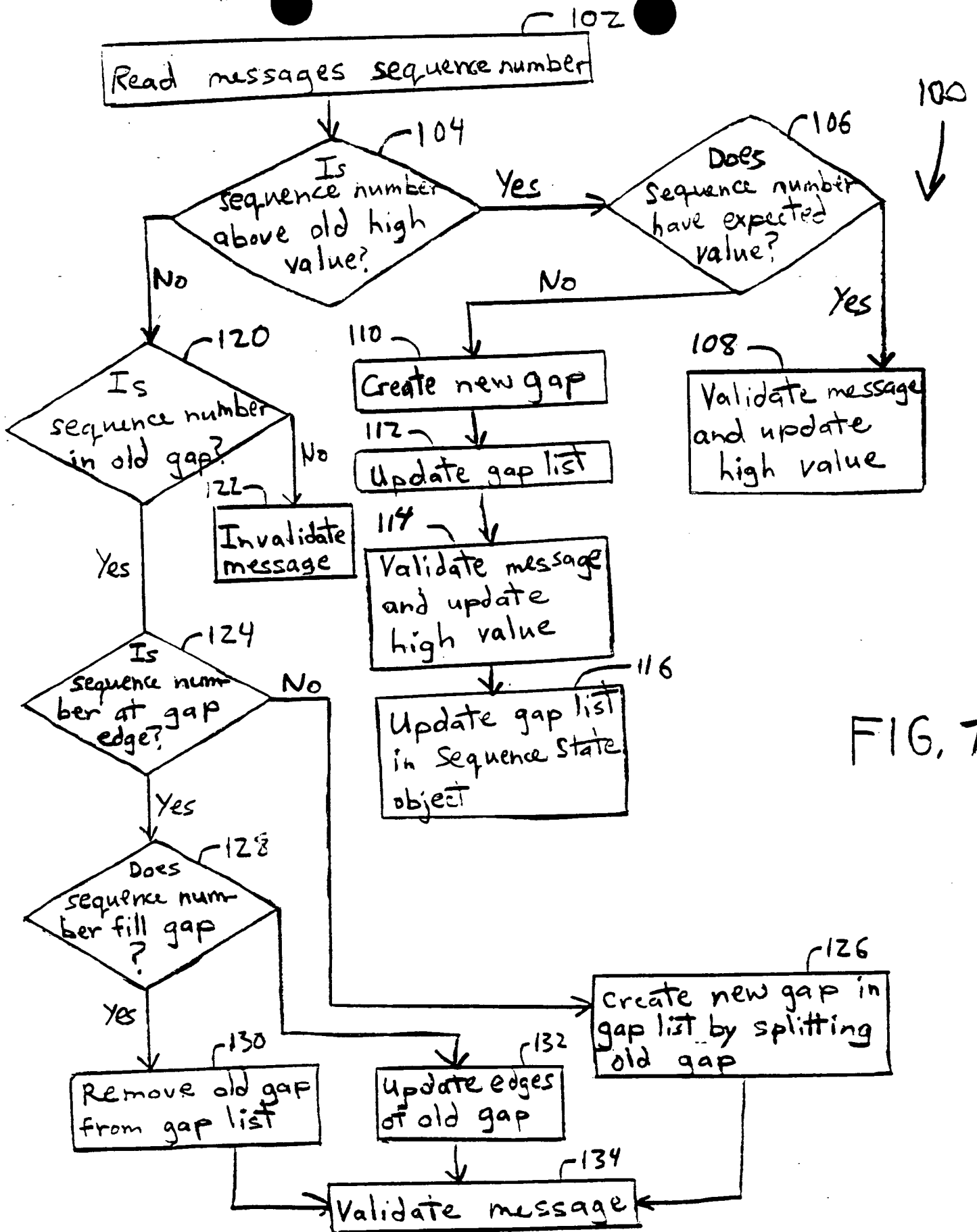
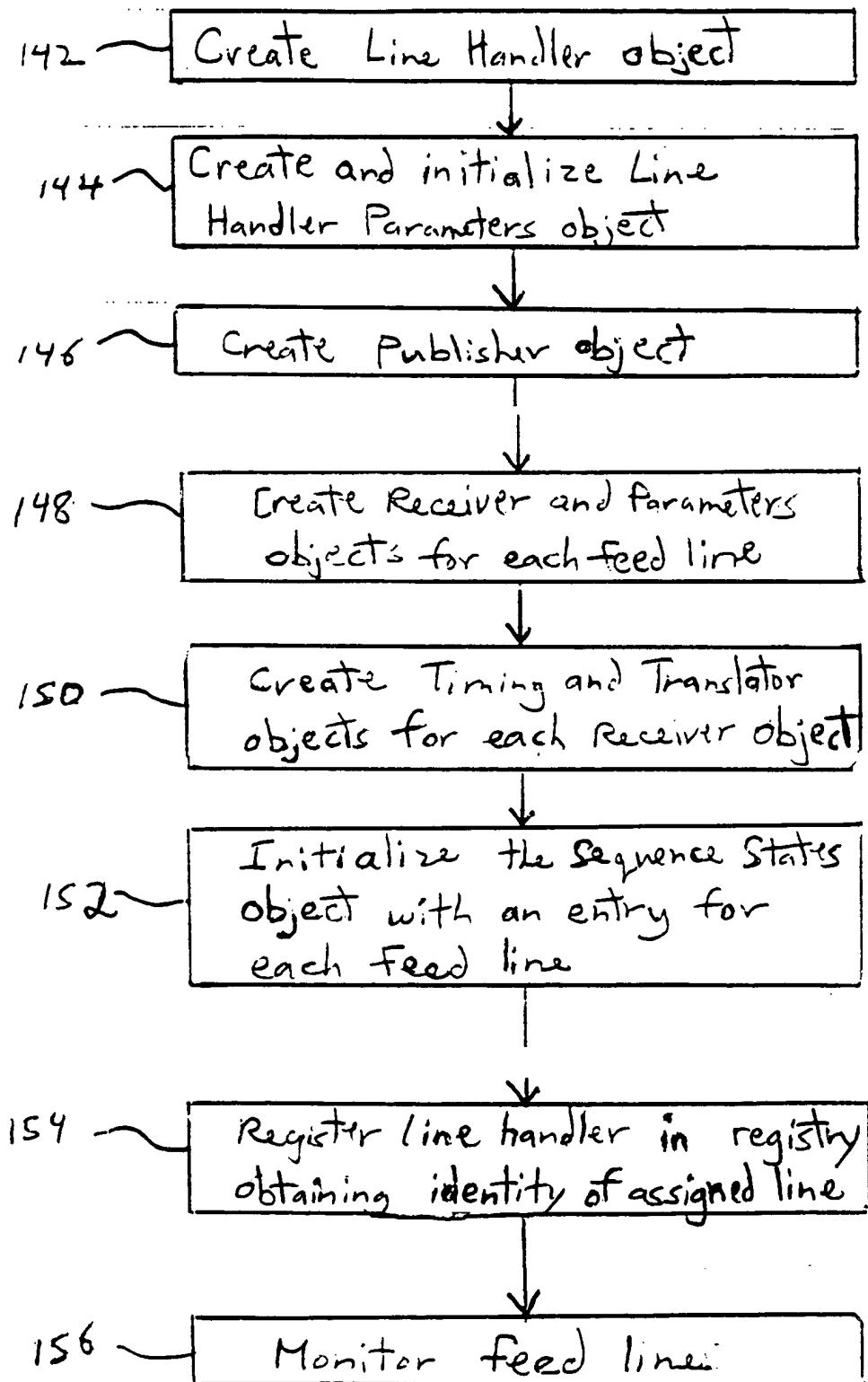


FIG. 7



140
↓

FIG. 8

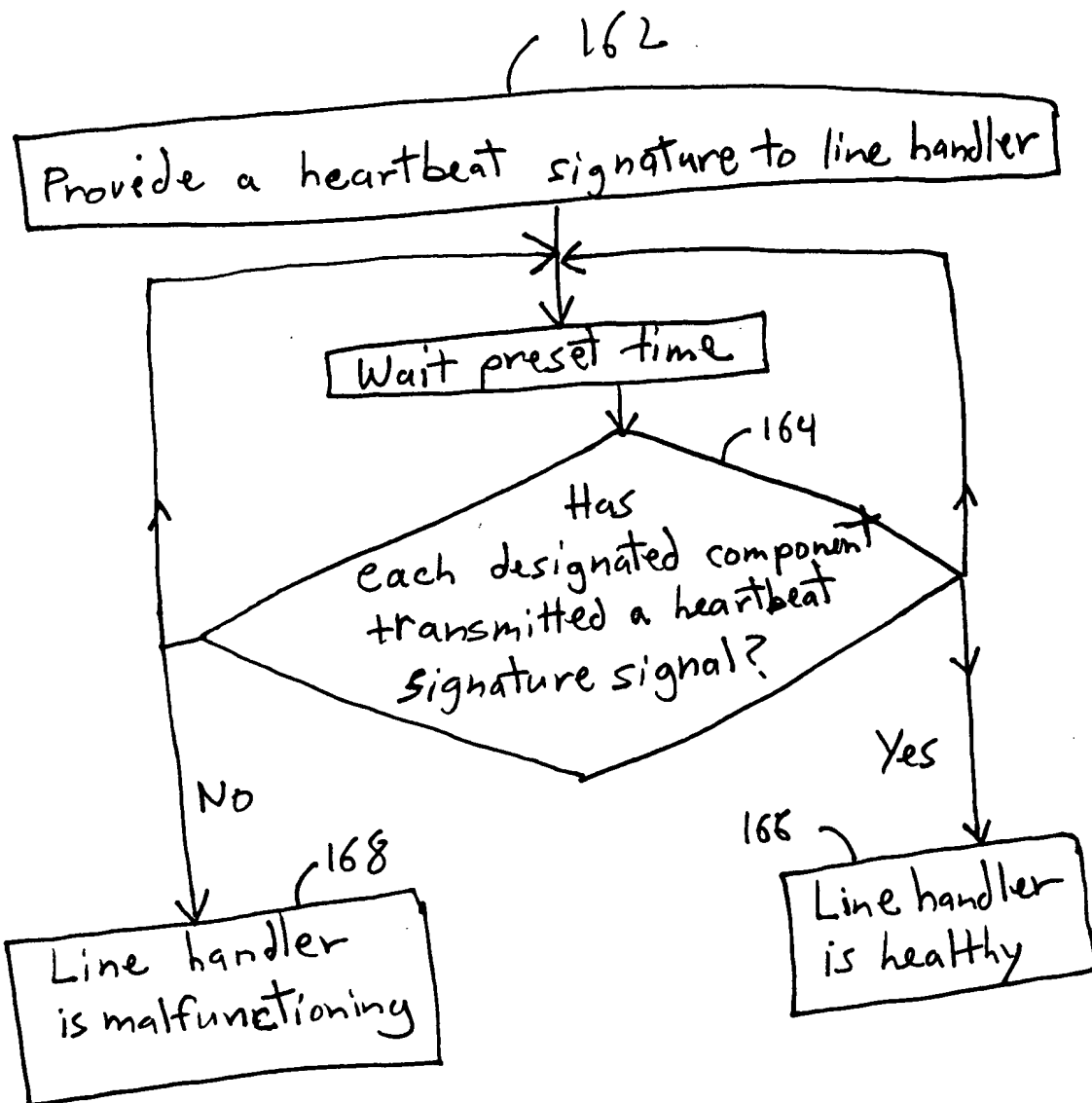


FIG. 9

166

6606729460

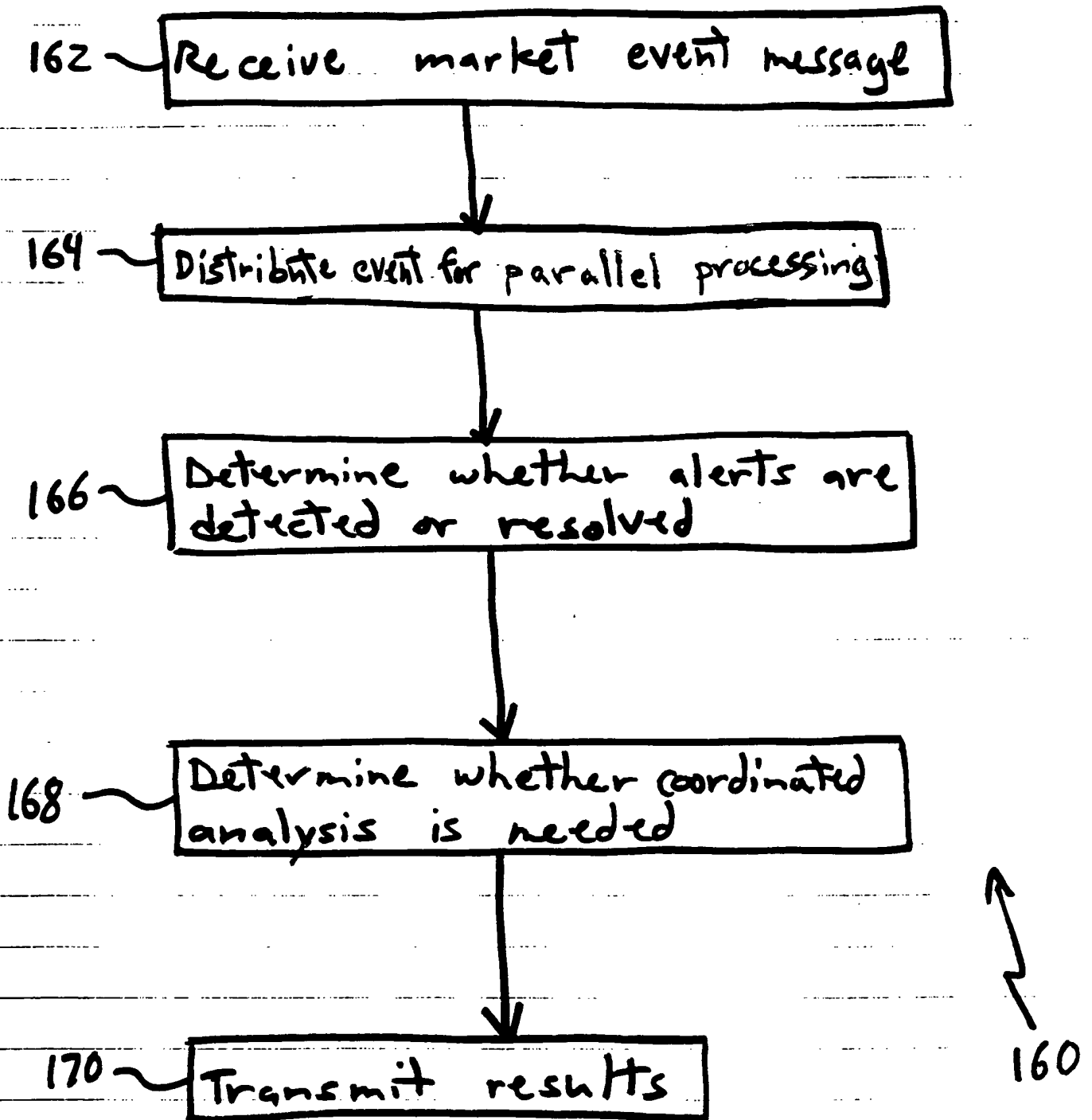
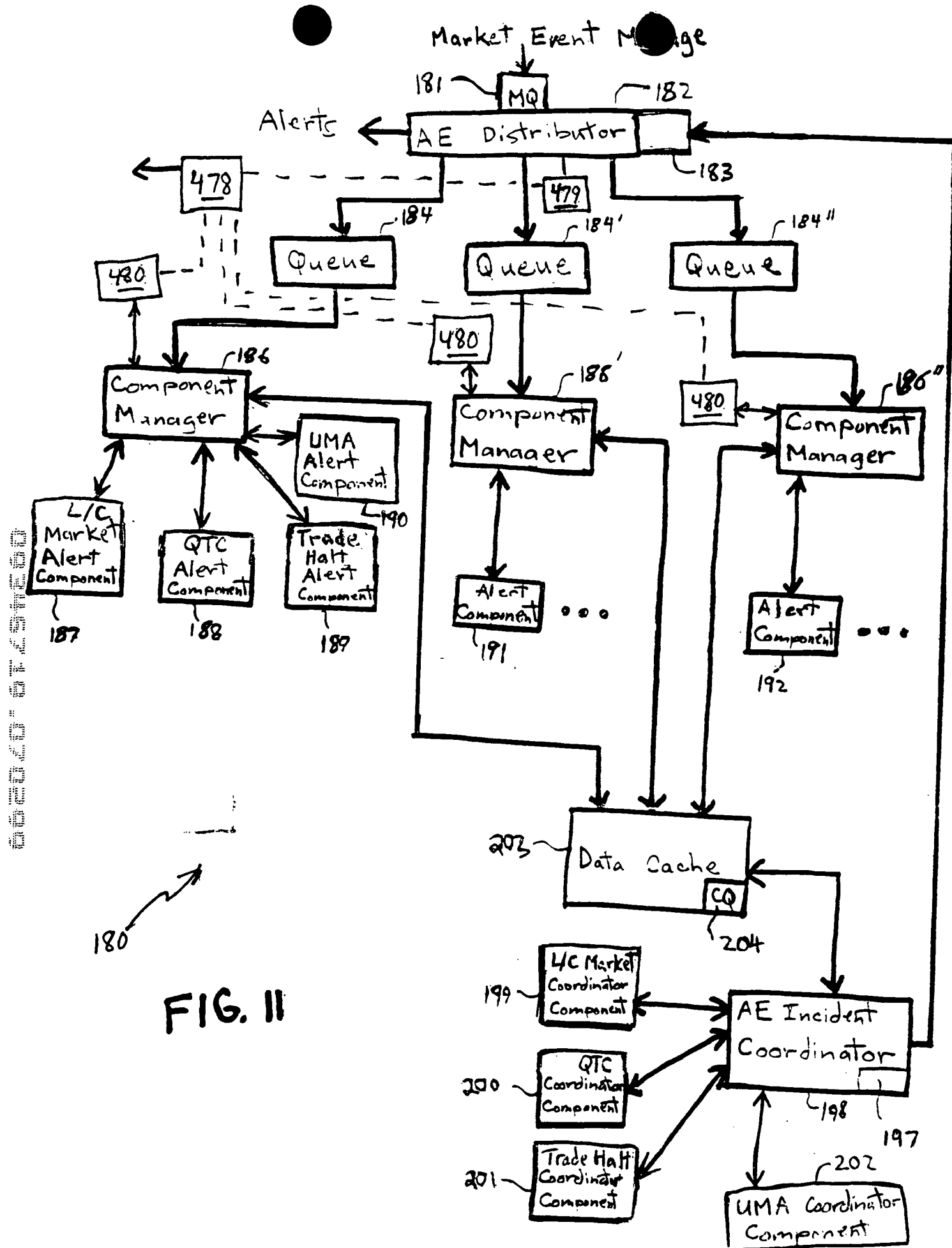


FIG. 10



Market Event
Messages

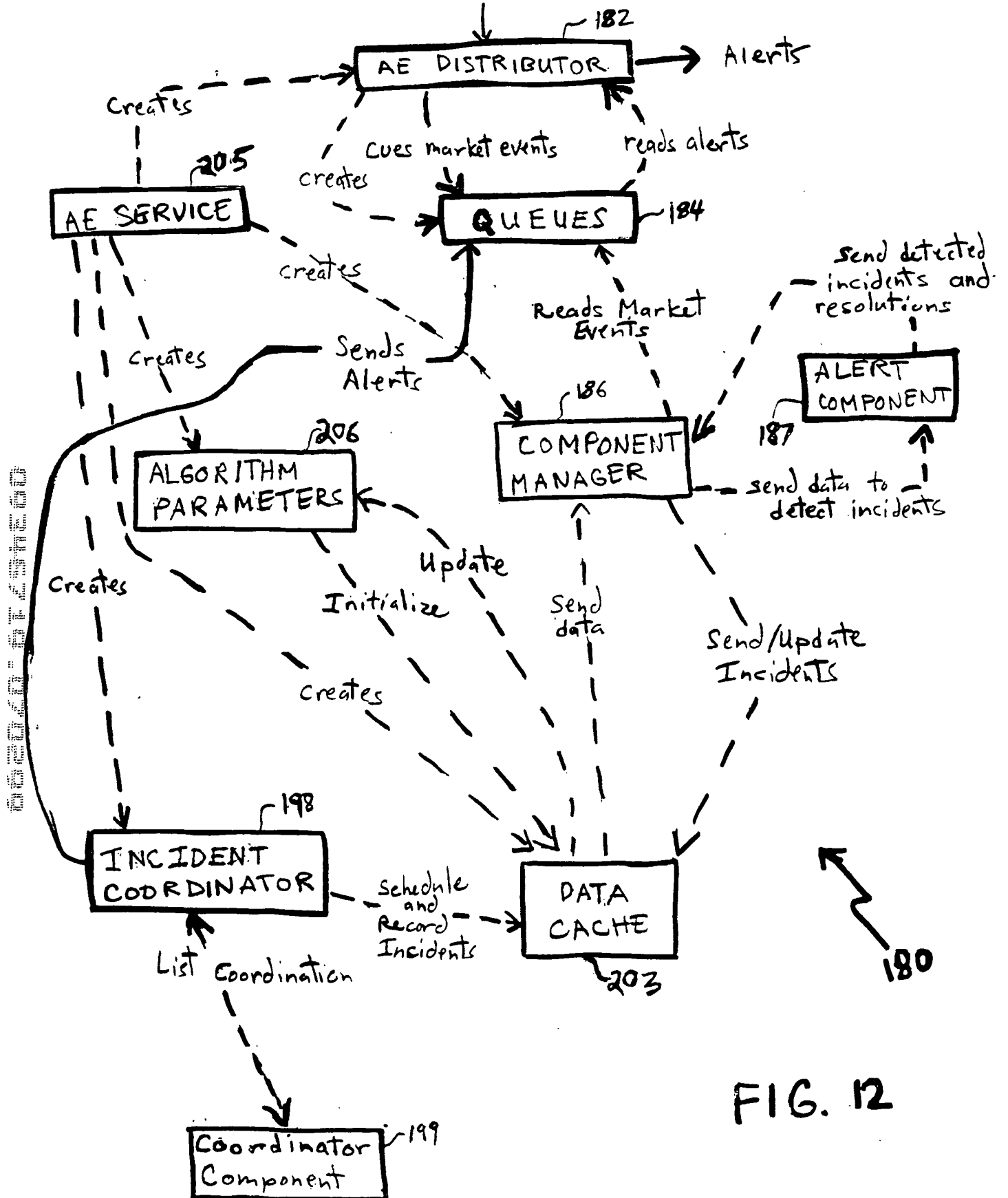
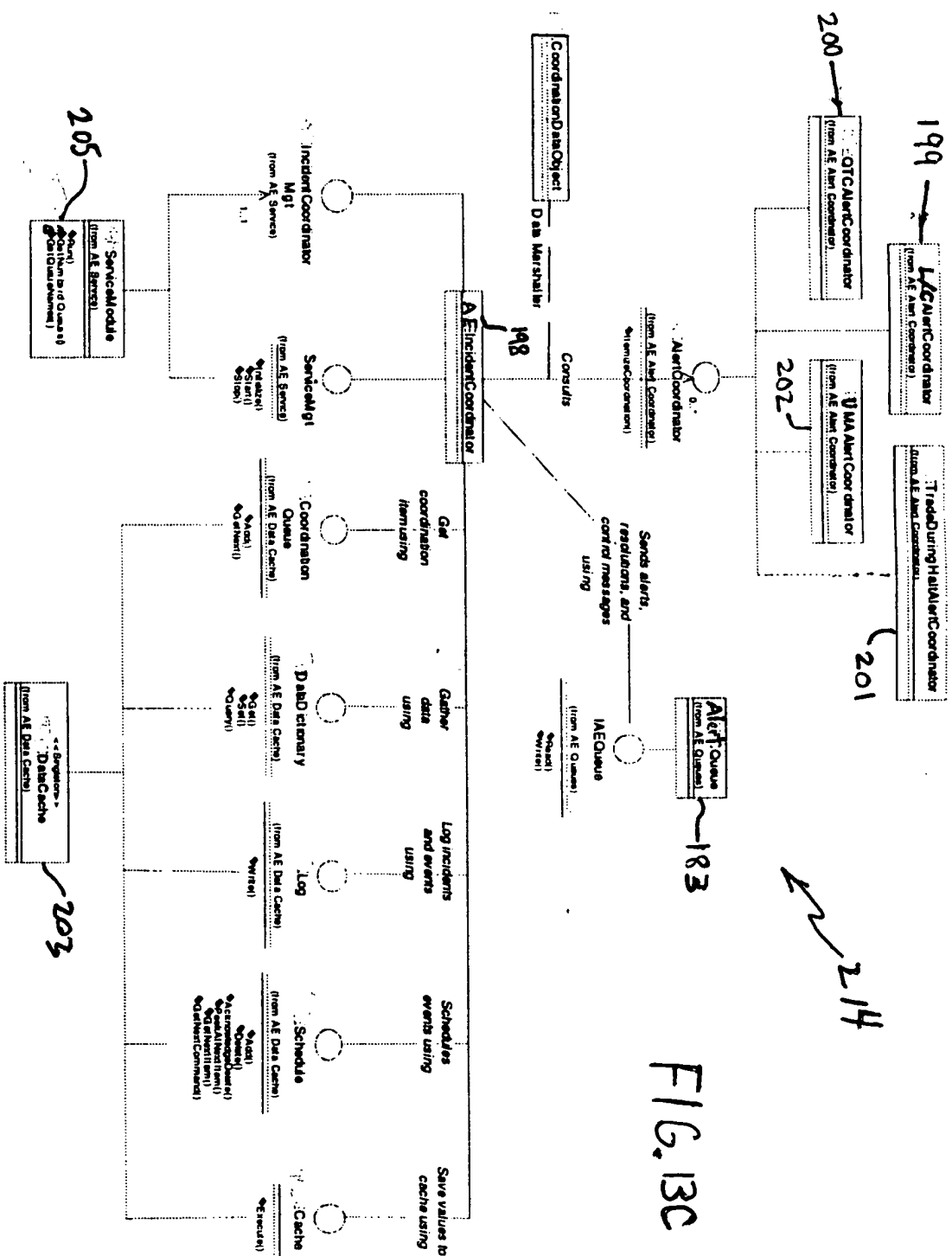


FIG. 12

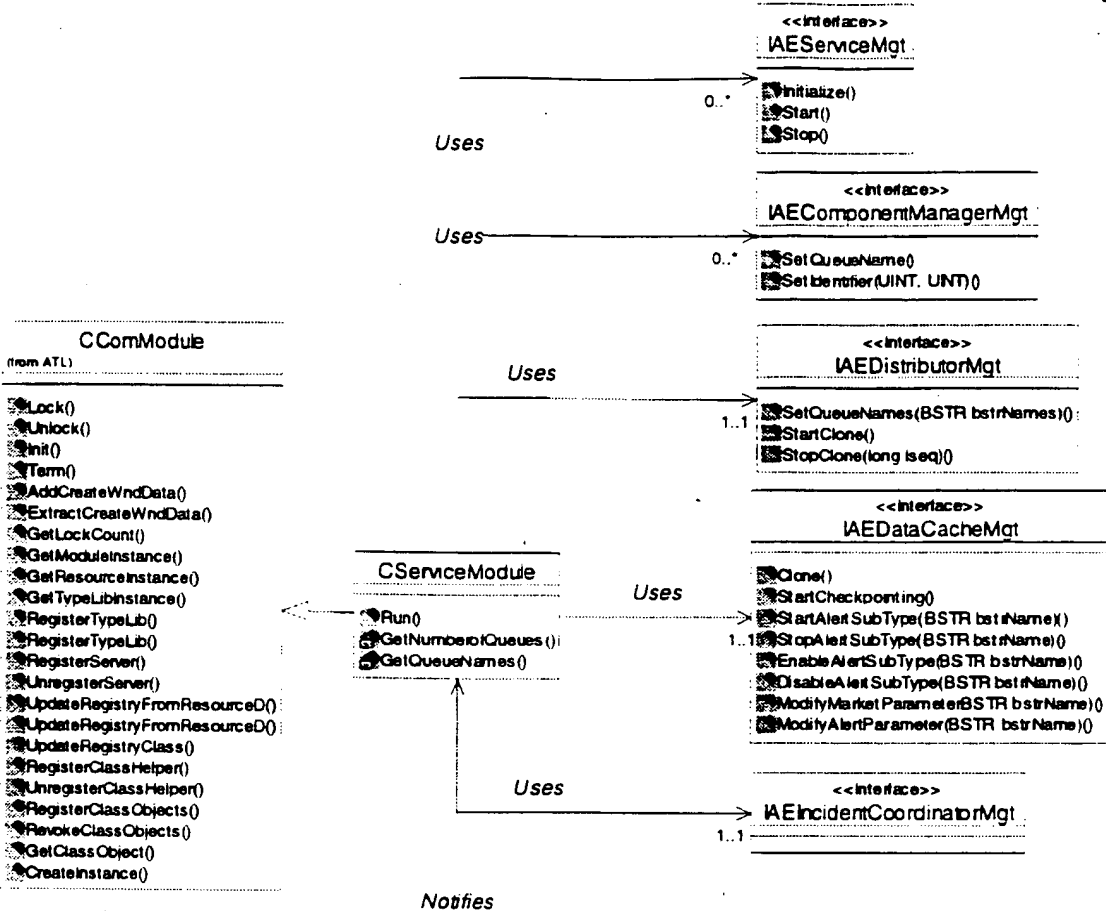
210



184 →



Abstract



204

38

CAEApplicationManager

+Implements

```

<<interface>>
IAEApplicationAdm
(from AE Algorithm Parameter)

GetValue(ID : DWORD, varValue : VARIANT) : return
SetValue(nID : DWORD, varValue : VARIANT) : BOOL
GetParameterTable(bstrAlgoName : BSTR, bstrTable : BSTR*) : BOOL
GetAlgorithmTable(bstrAlgorithmTable : BSTR*) : BOOL
Start(argname) : return
Stop(argname) : return
Clone(argname) : return
Checkpoint(argname) : return
    
```

CComObjectRootEx<class CComSingleThreadModel>

DispatchImpl

```

DispatchImpl()
DispatchImpl()
GetTypeInfo()
GetIDsOfNames()
Invoke()
GetTypeInfoCount()
    
```

CComCoClass

```

GetObjectDescription()
GetObjectCLSID()
Error()
Error()
Error()
Error()
Error()
Error()
    
```

FIG. 13D

242 Receive market event message from line handler

240 ↘
244 Determine issue and sequence number of received message

246 Is new number duplicate of old highest number?
Yes → 248 Discard

FIG. 14

250 Is message next expected message?
Yes → 252 Distribute message to queue for the message issue

No
254 Is message higher than expected message?
Yes → 256 Distribute message and data on new gap to queue

258 Is message in old gap?
Yes → 260 Distribute message and modification to old gap to queue → 262 Update gap list in data cache
No → 264 Message is duplicate — discard

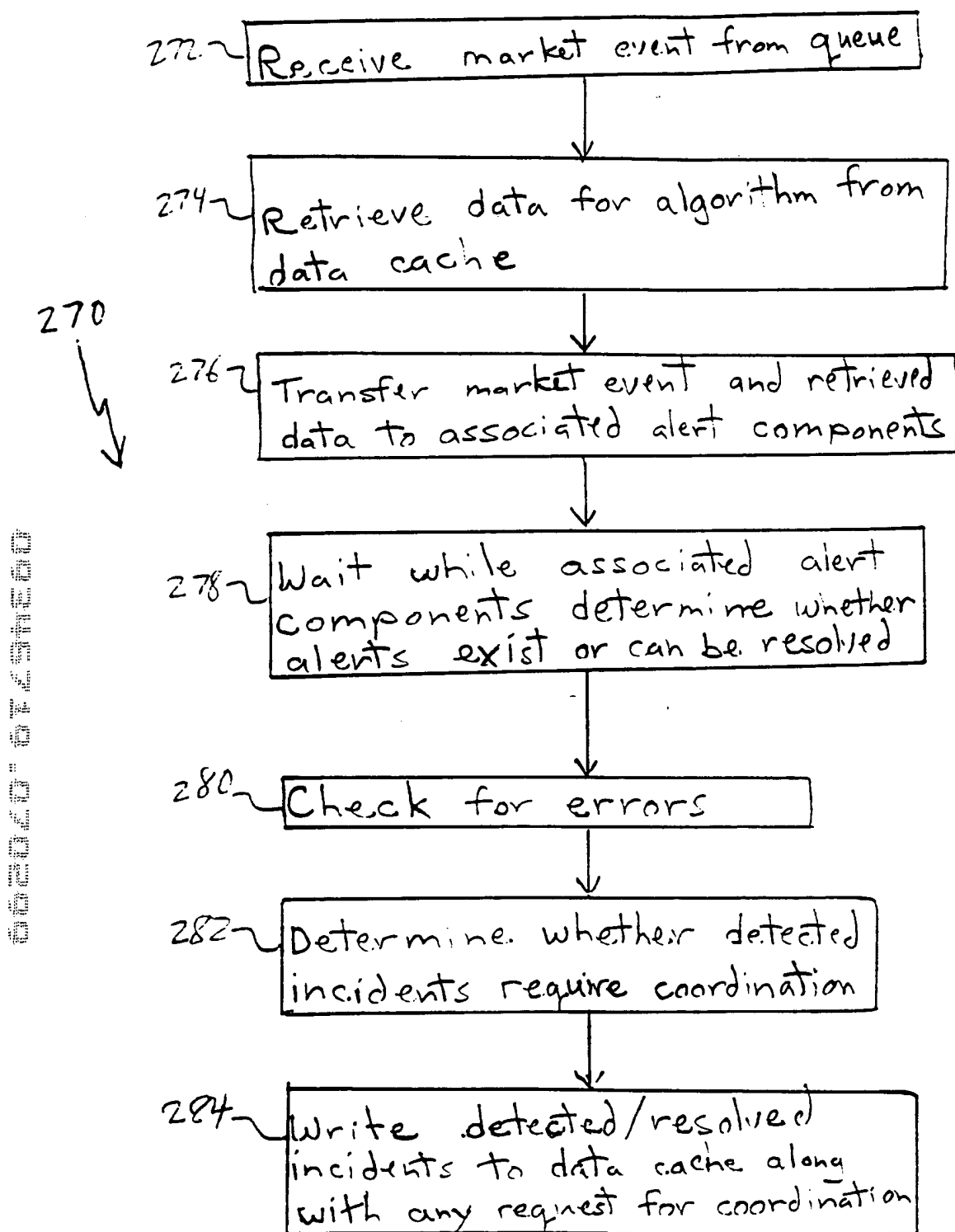


FIG. 15

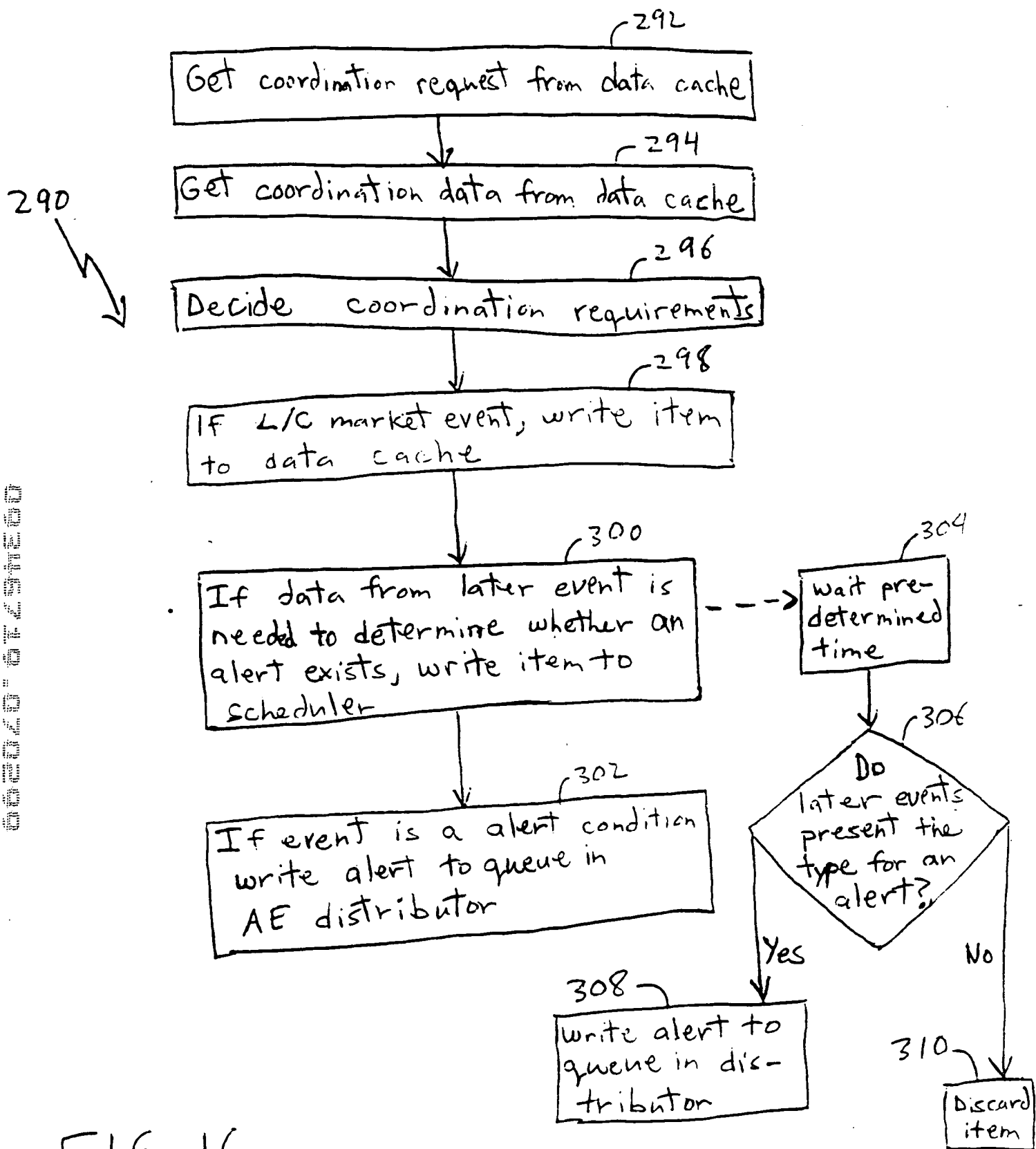
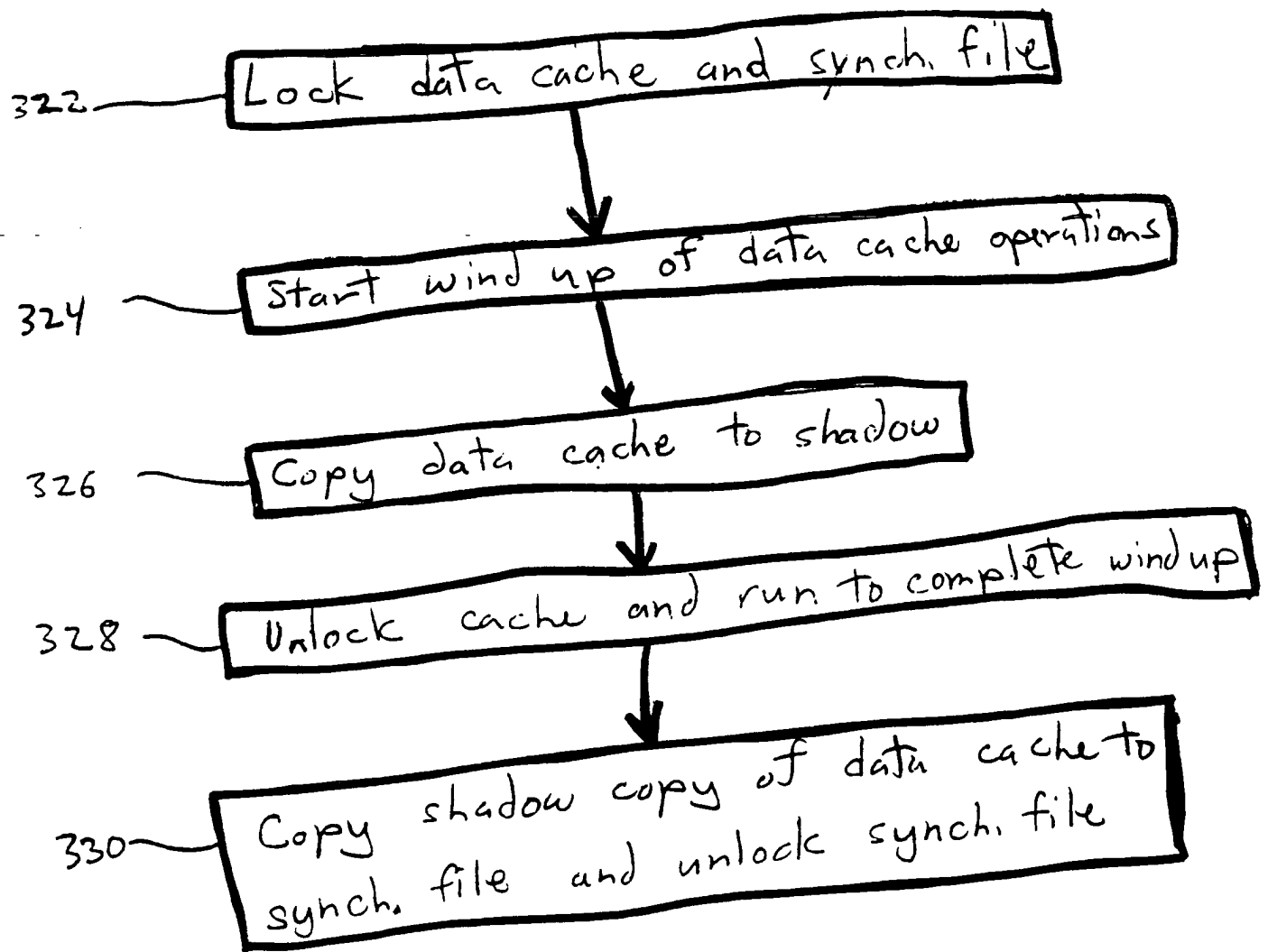


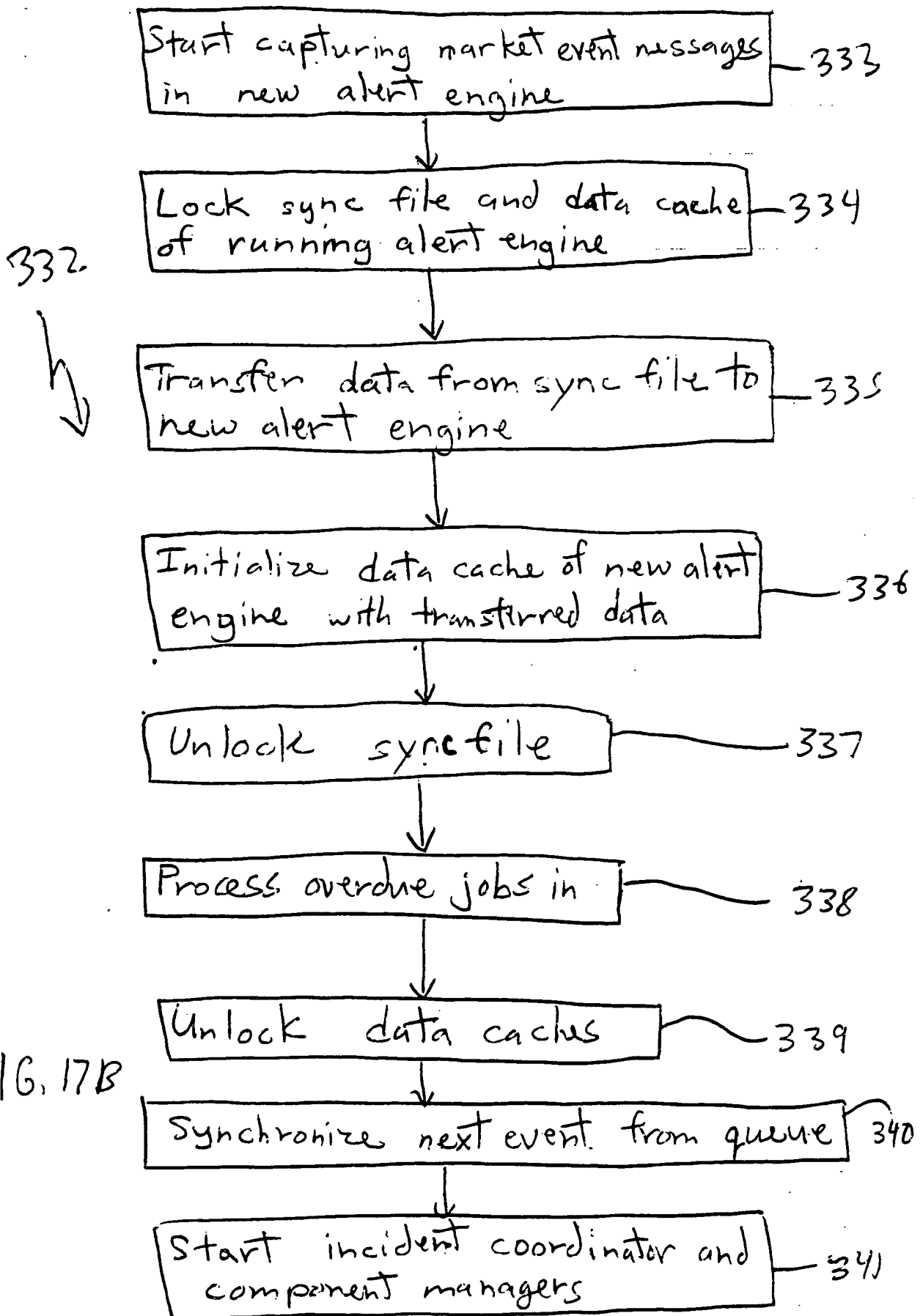
FIG. 16



320

FIG. 17A

00000-07294600



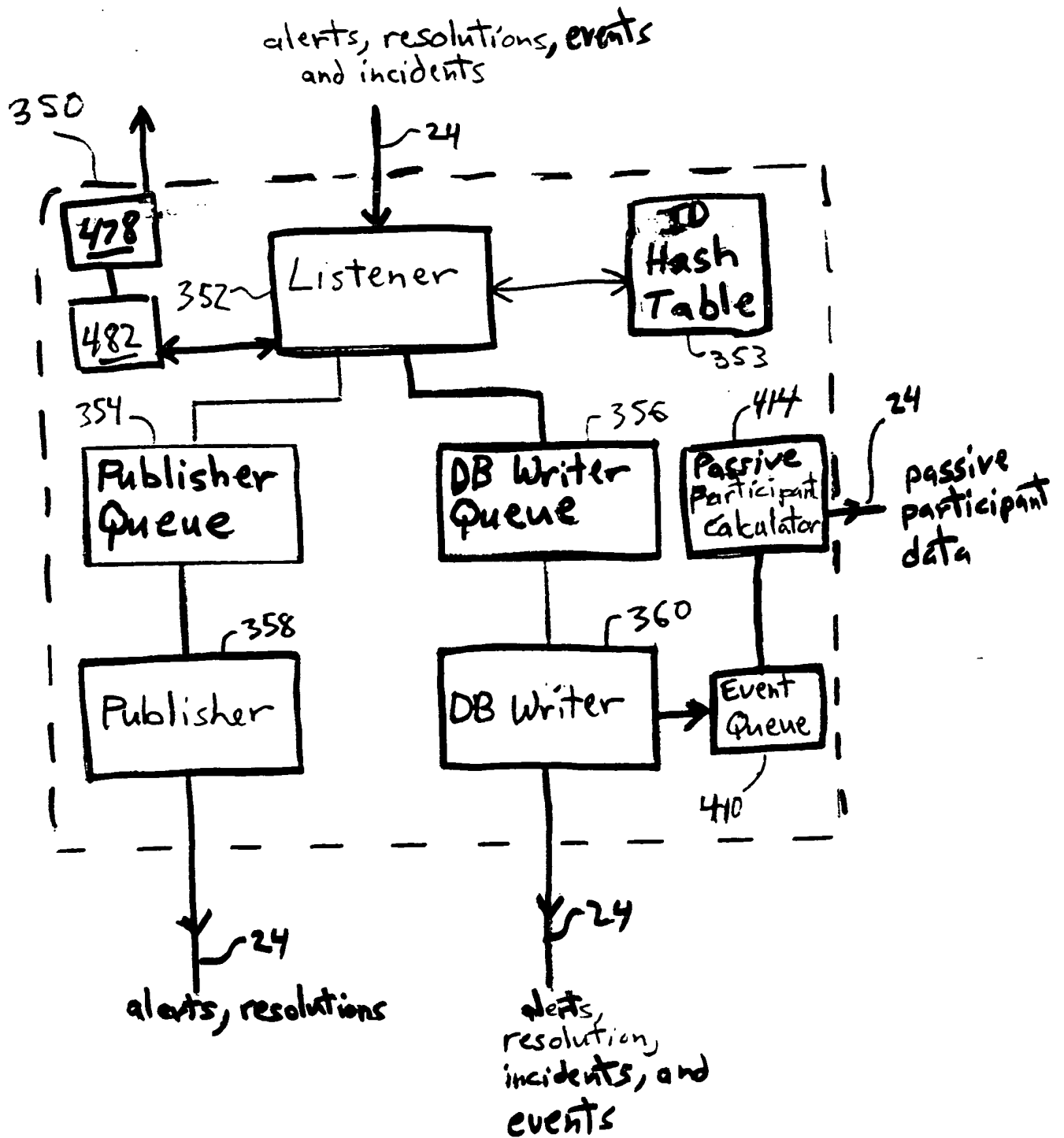


FIG. 18

FIG. 19

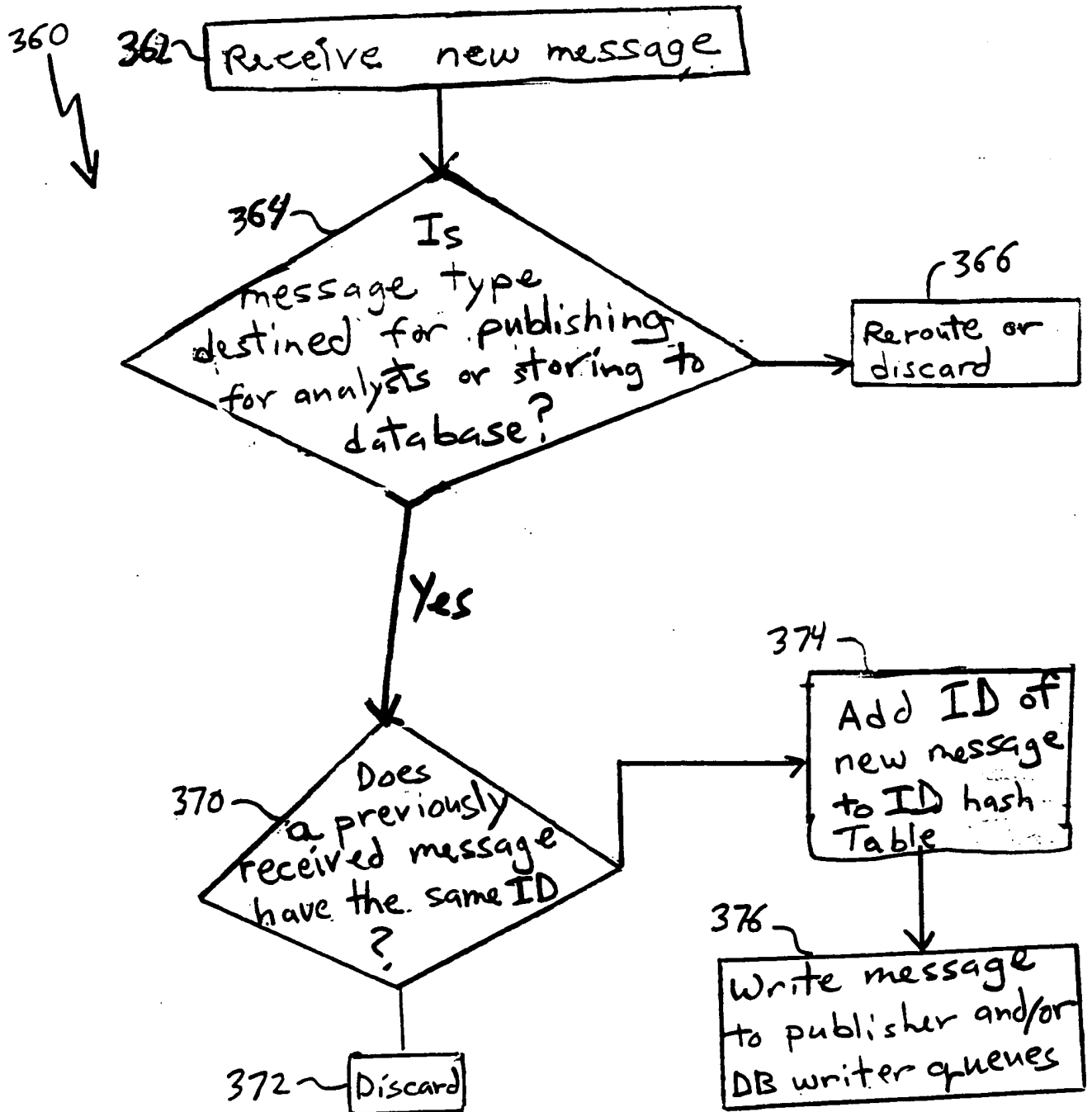
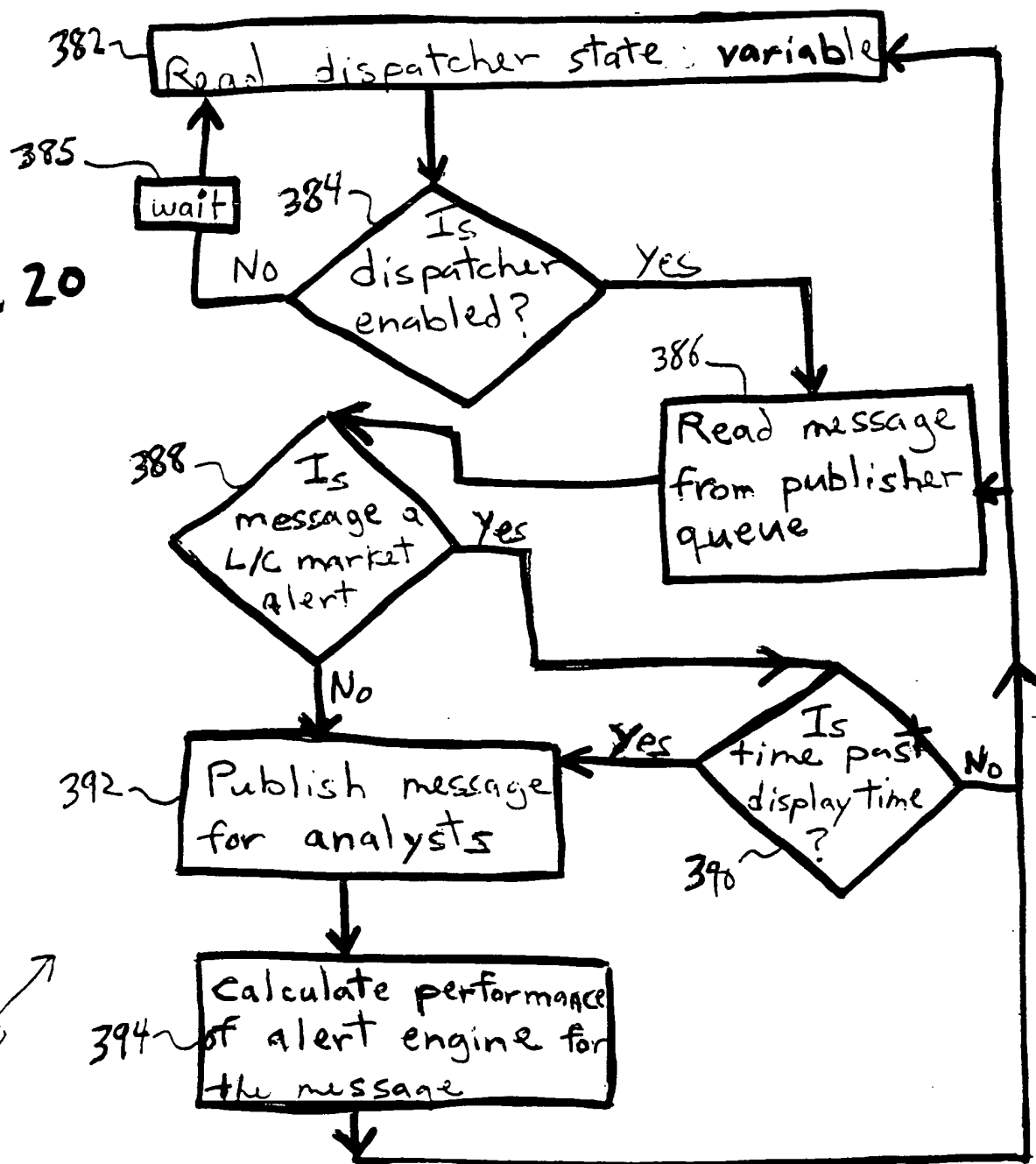


FIG. 20



00000-01294E50

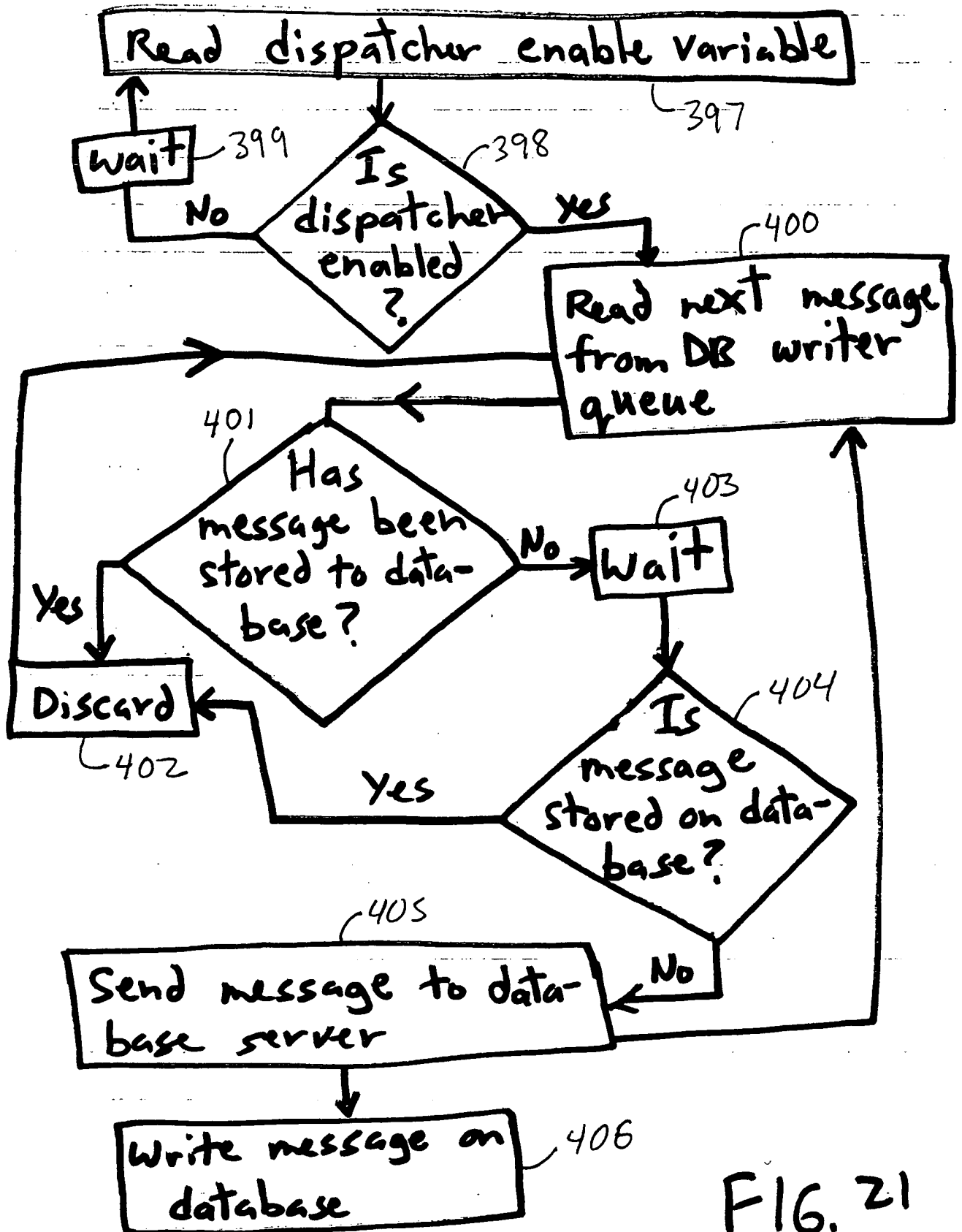


FIG. 21

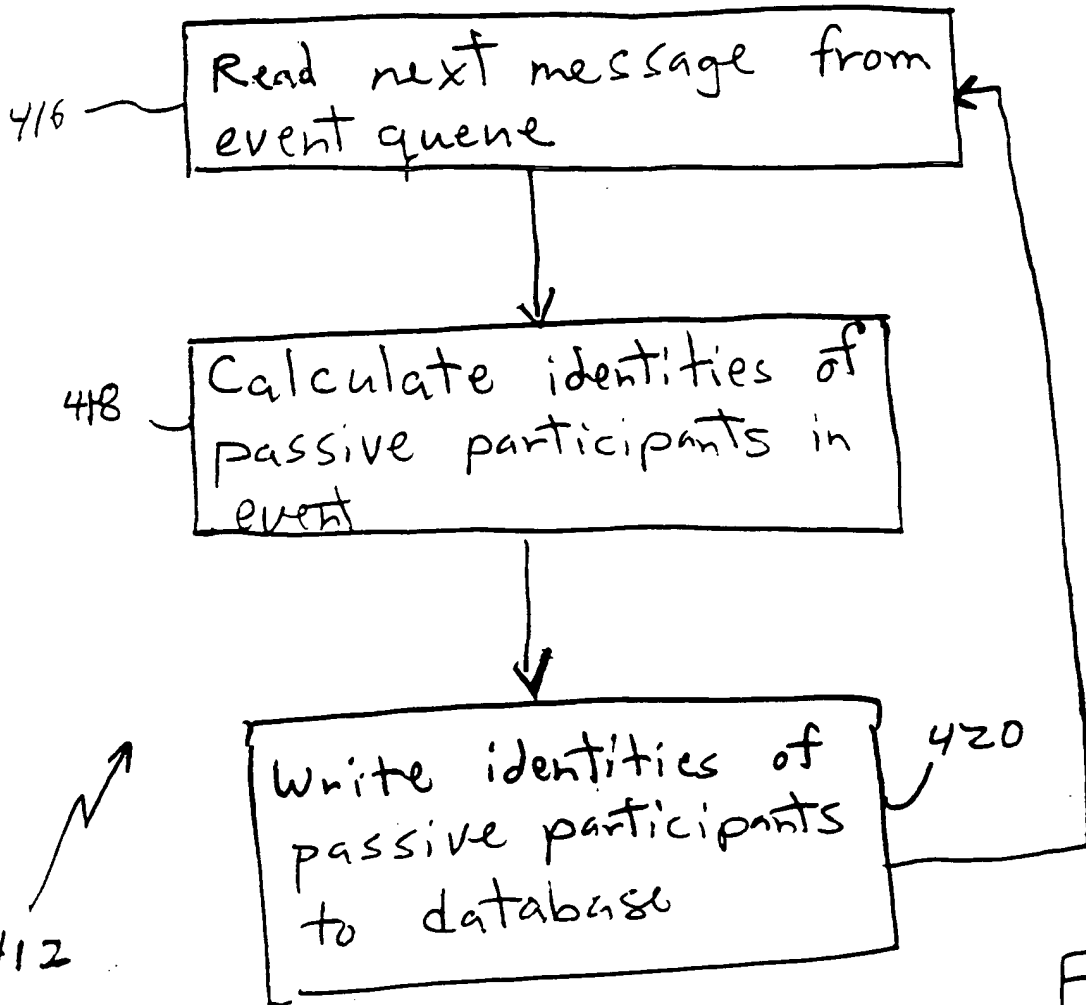
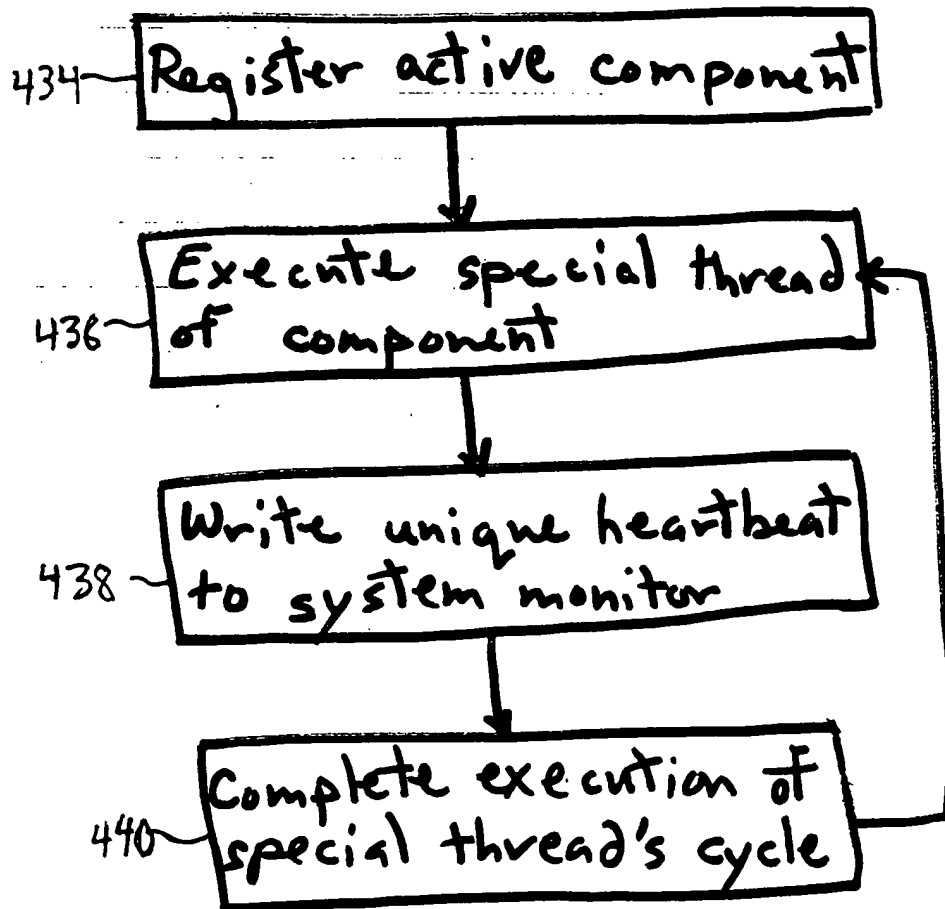


FIG. 22



432

FIG. 23

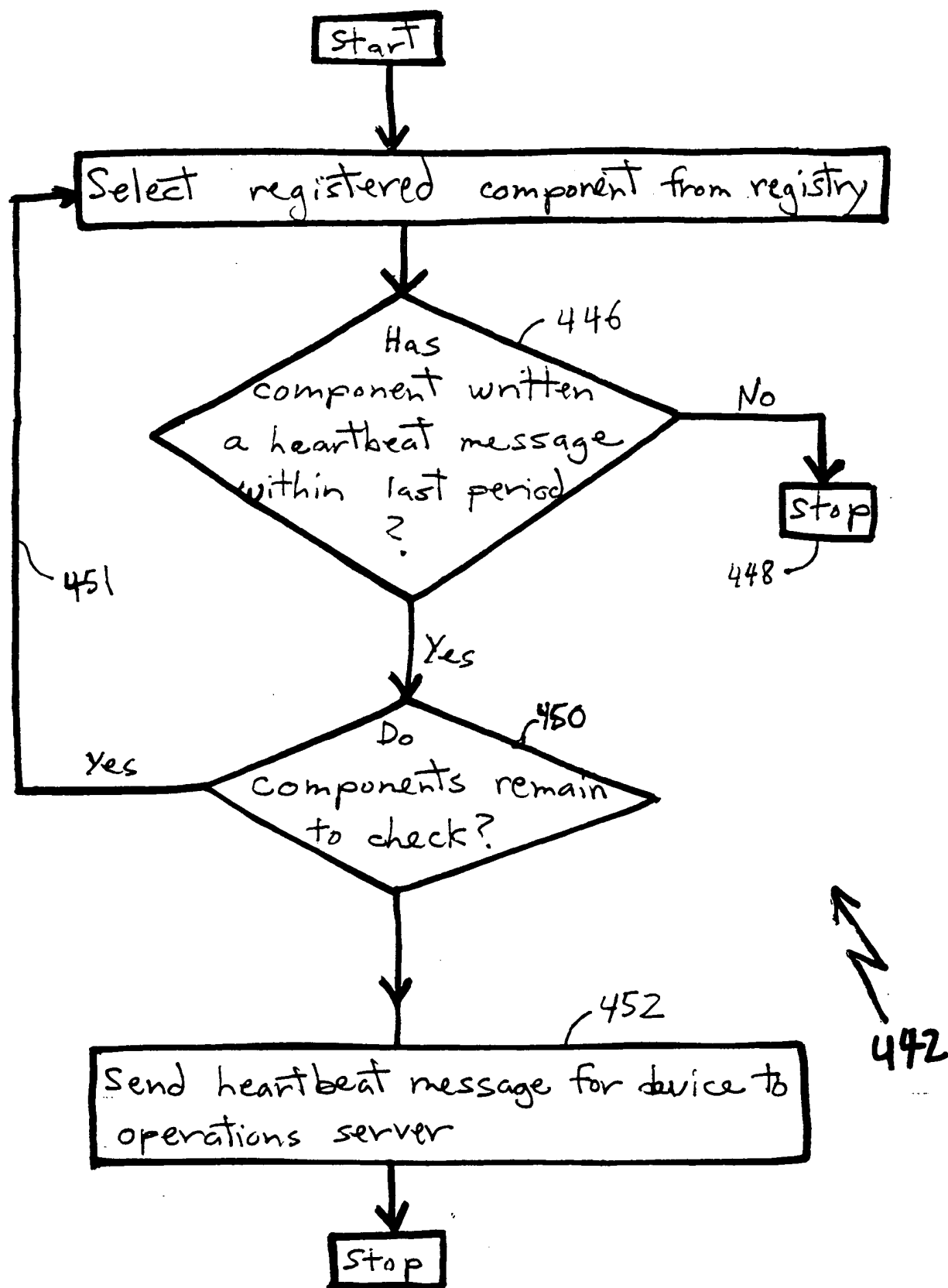
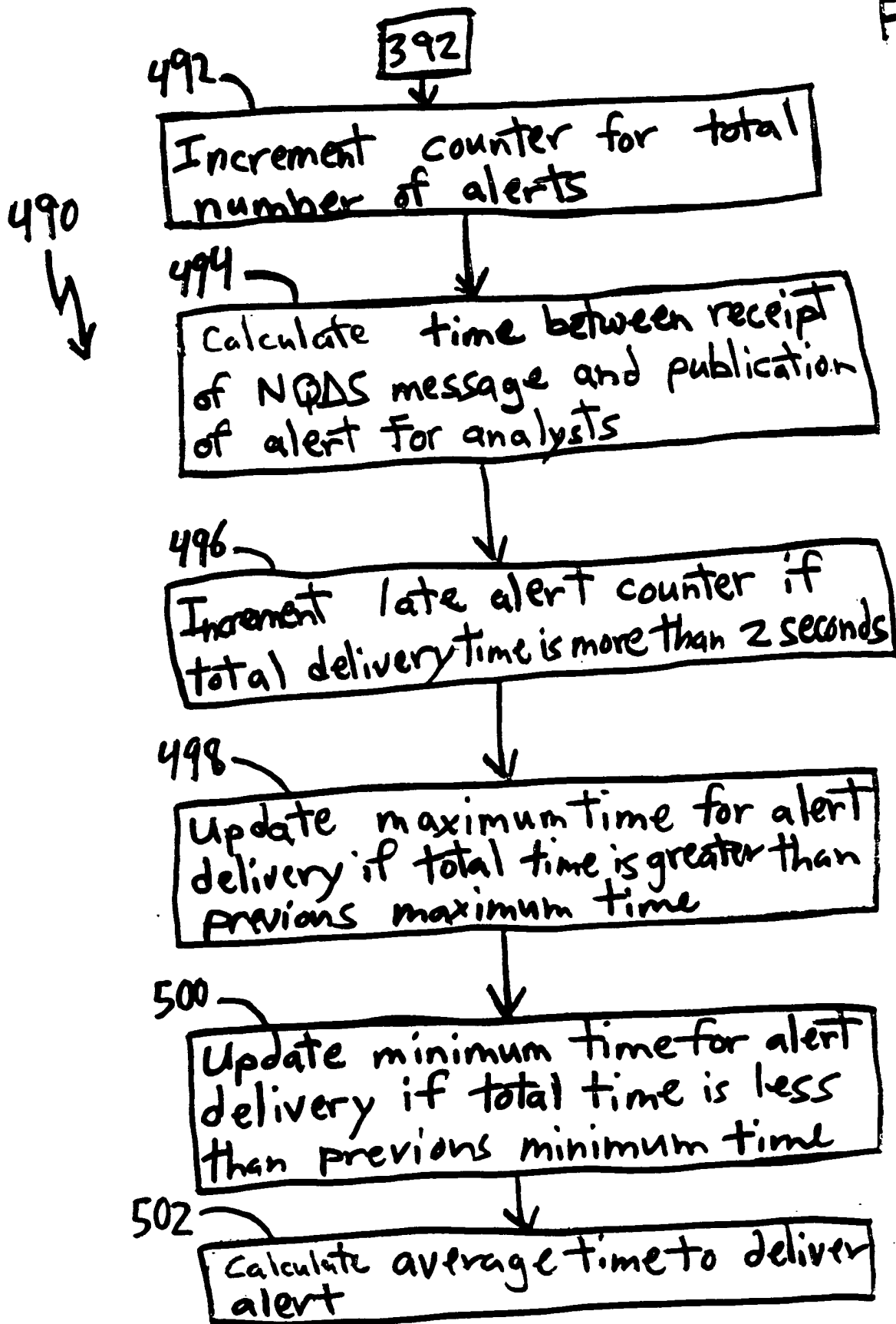


FIG. 24.



FIG. 26



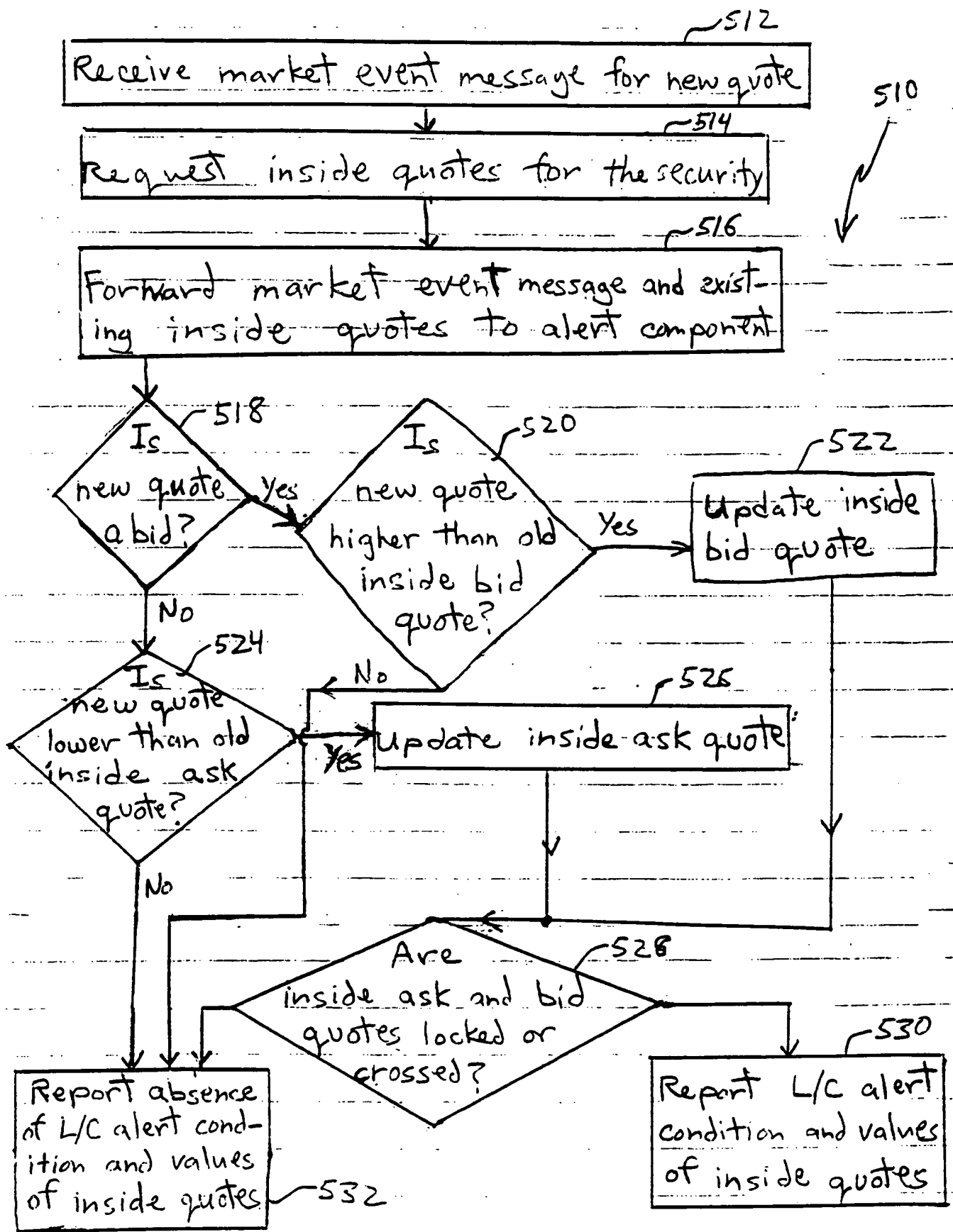


FIG. 27

000006729700

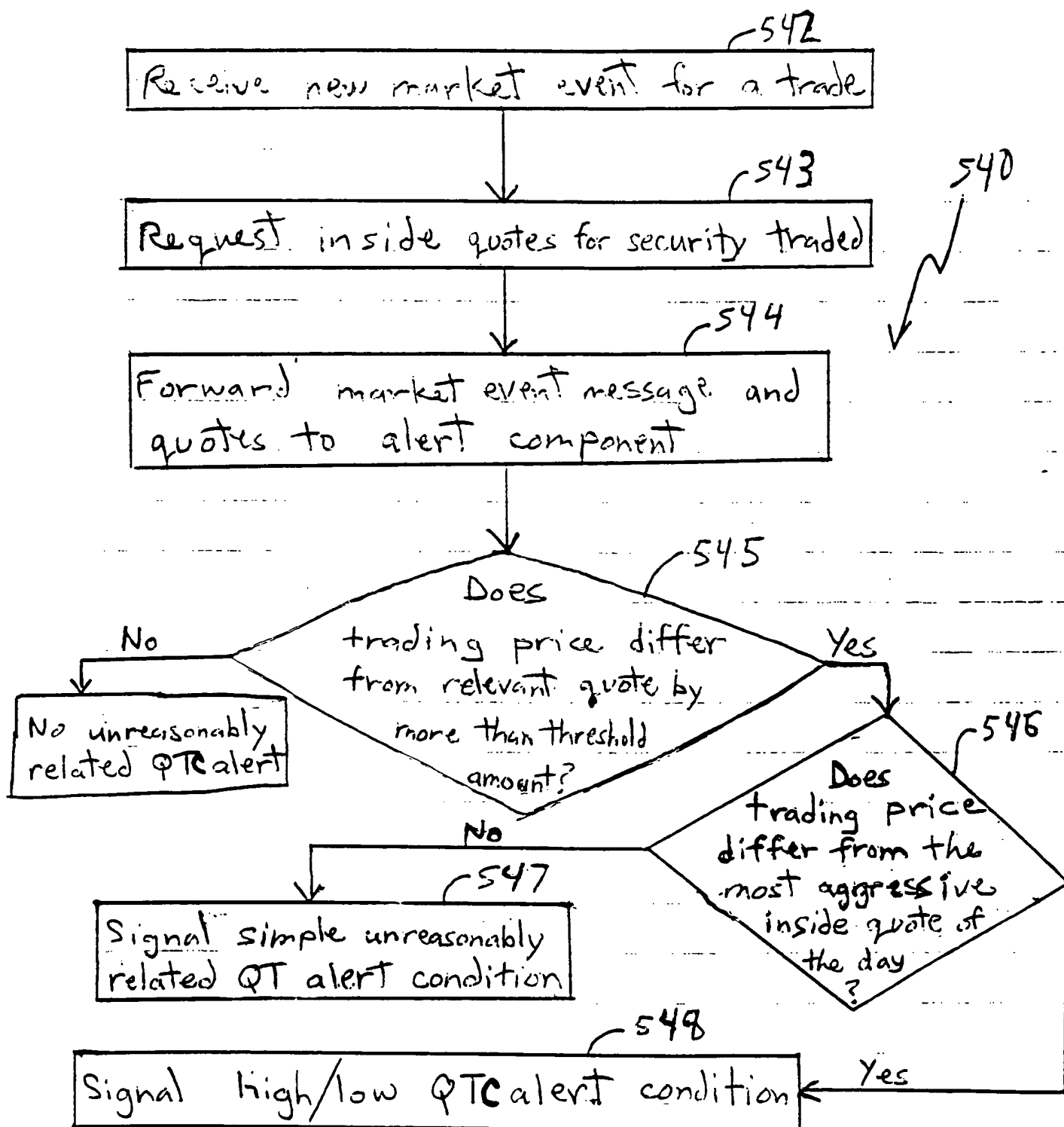


FIG. 28

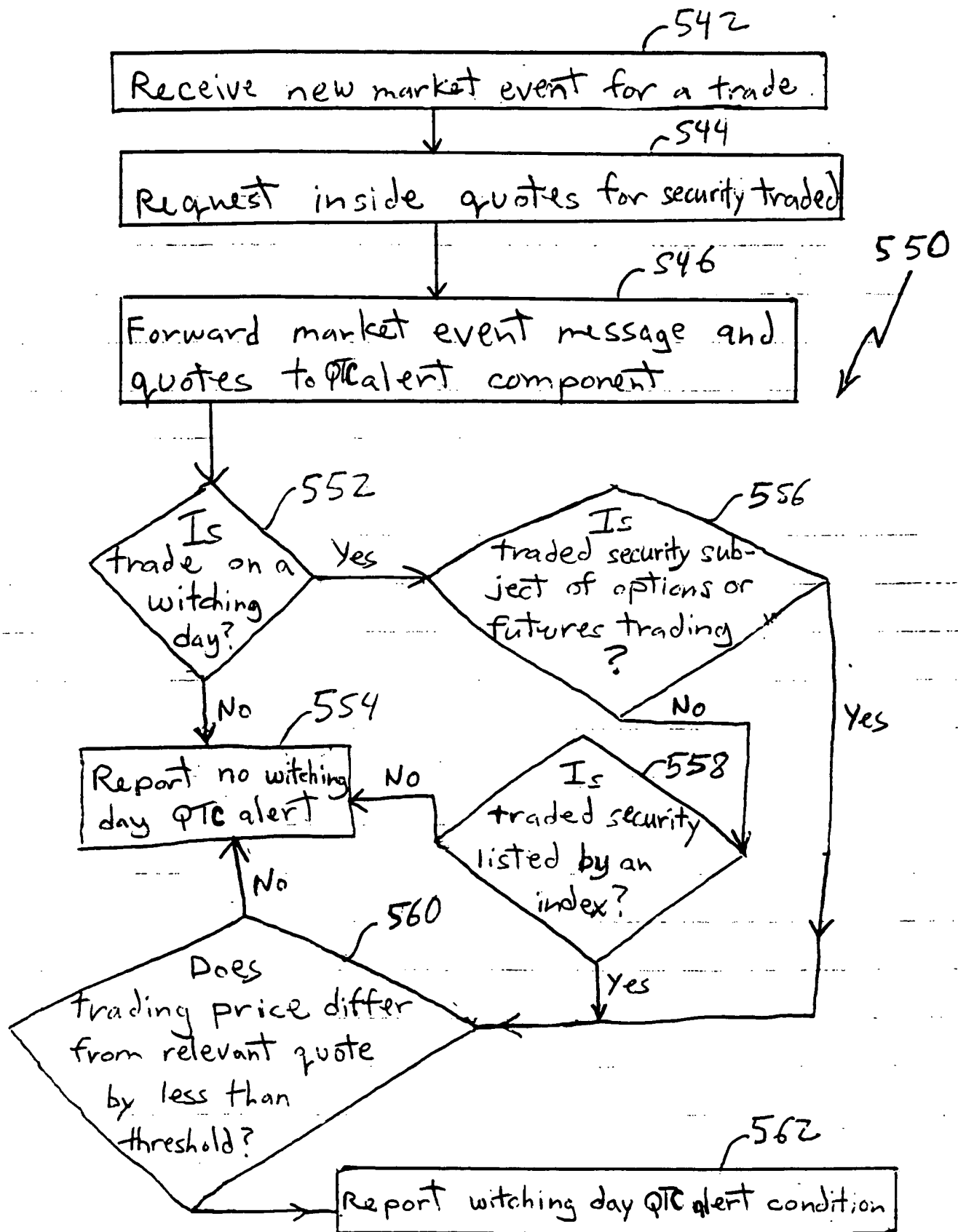


FIG. 29

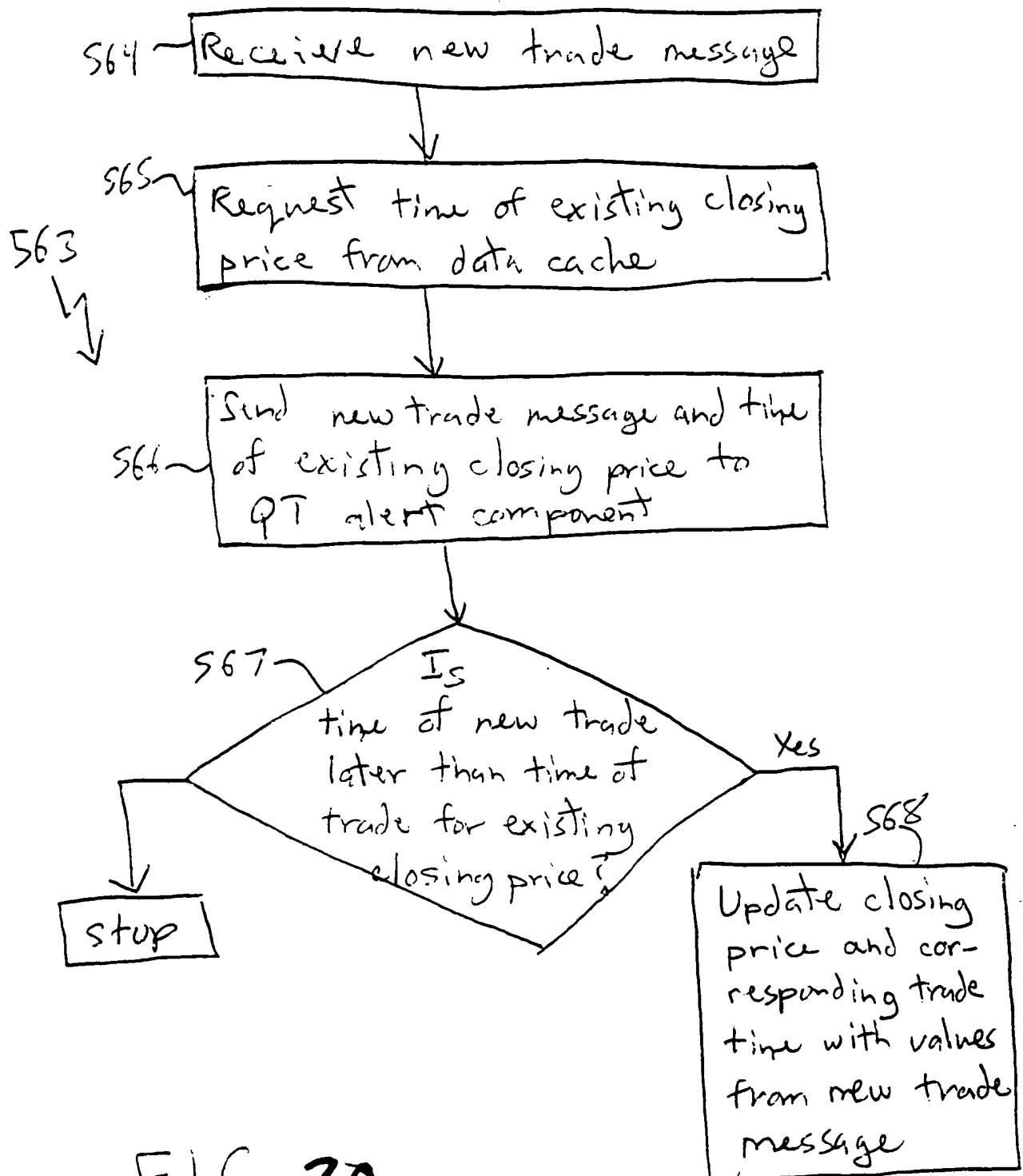
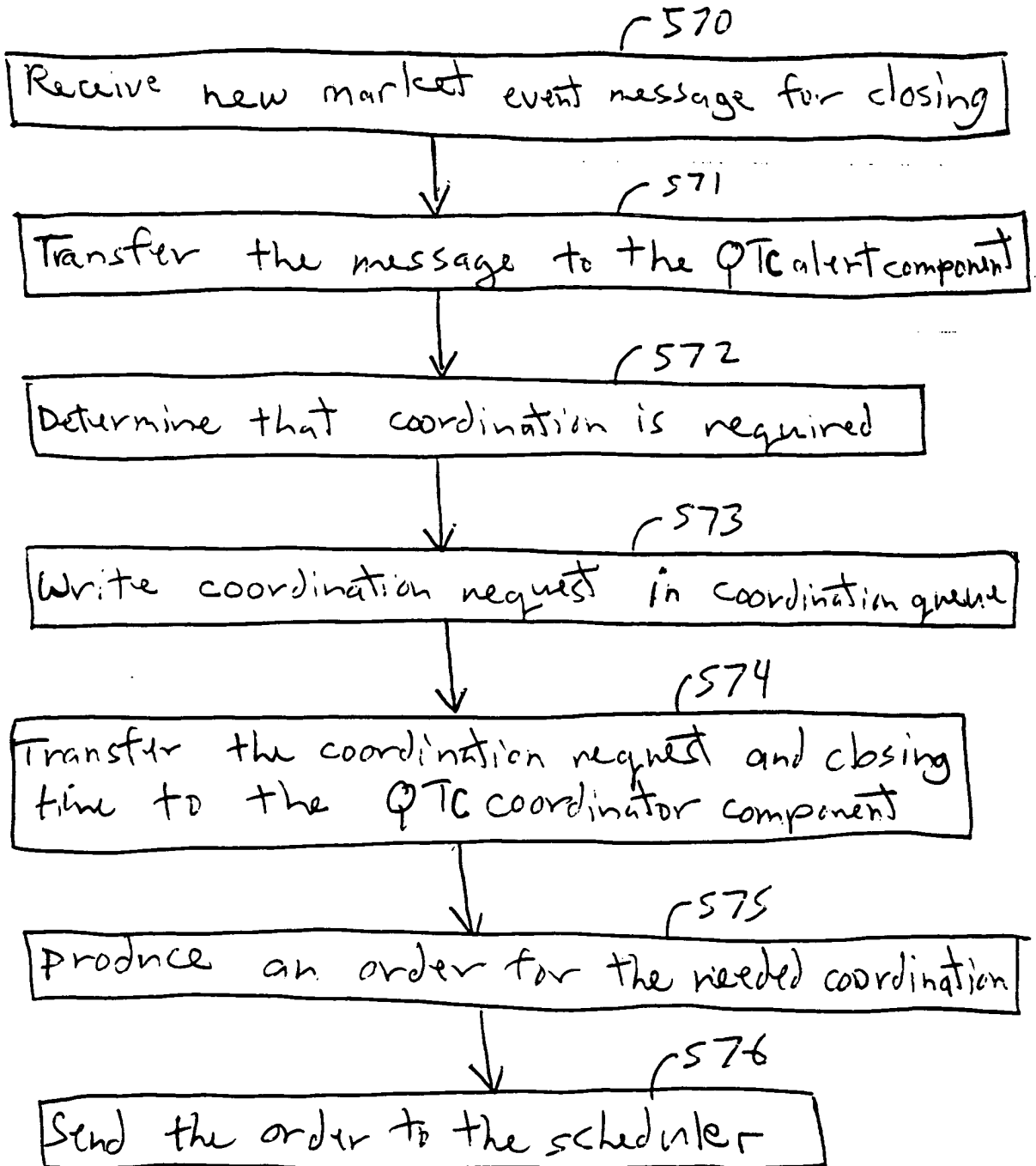


FIG. 30

569
↓



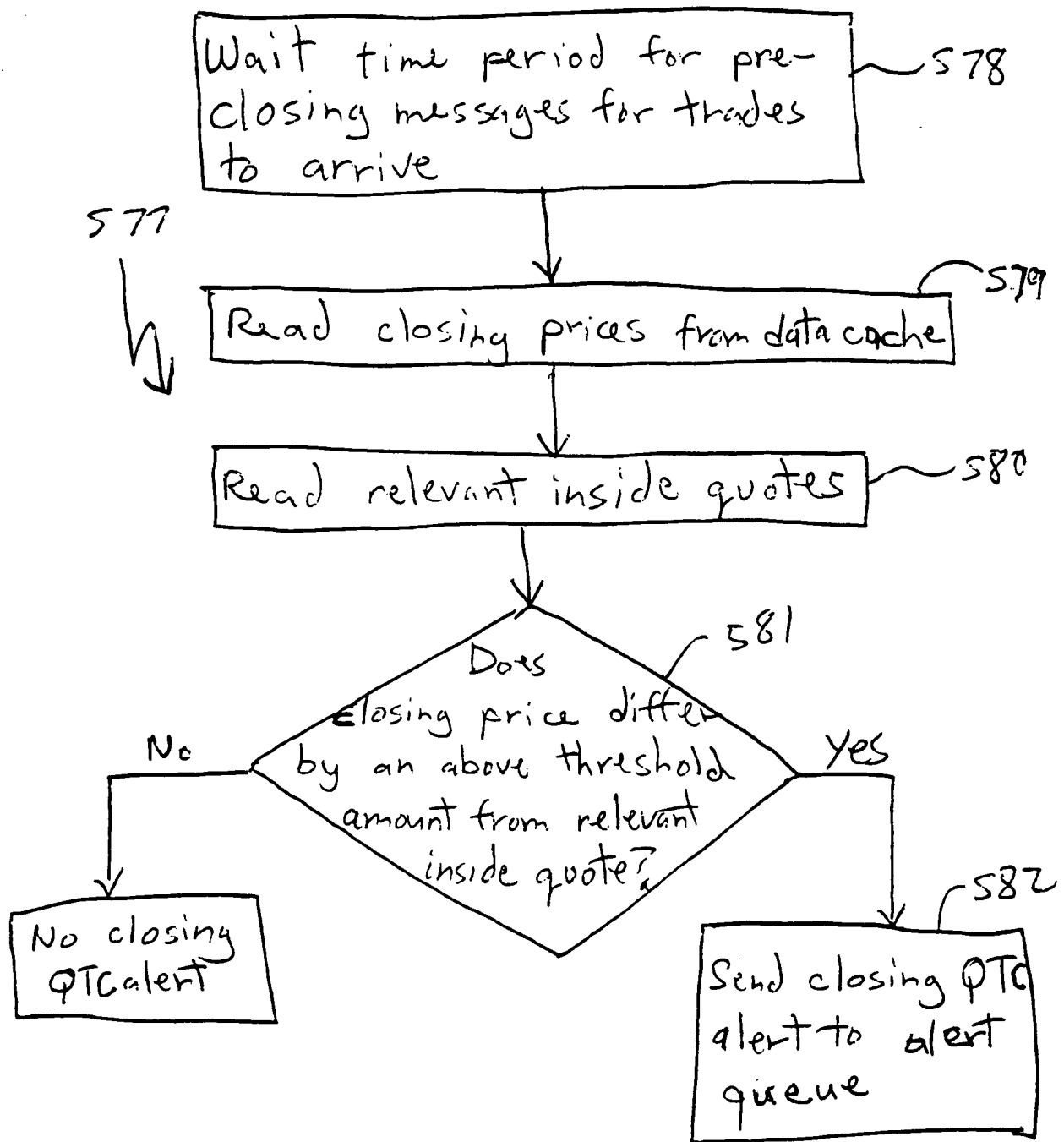
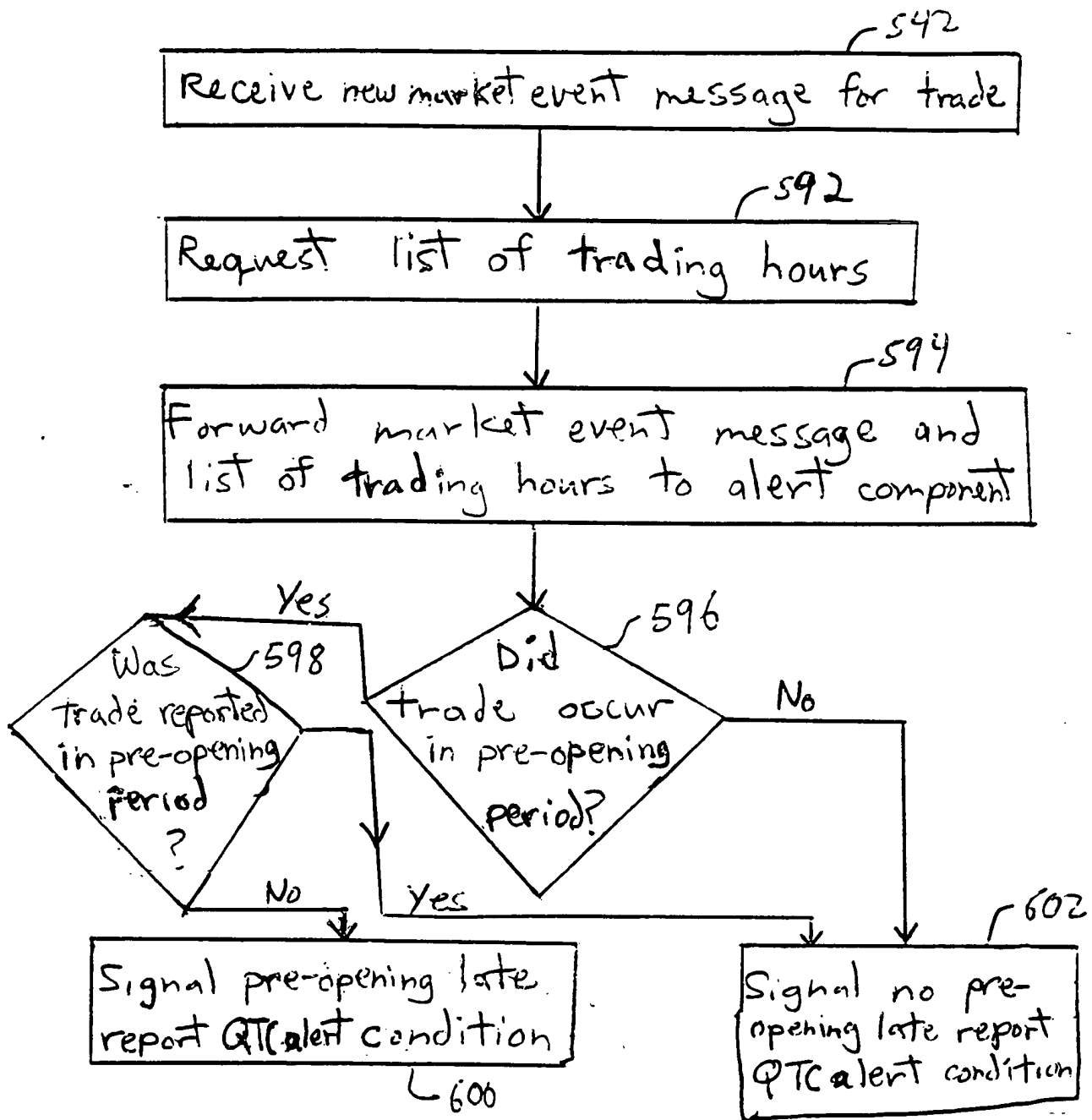


FIG. 32

6000-01-01-0000



590

FIG. 33

604 606 608 610

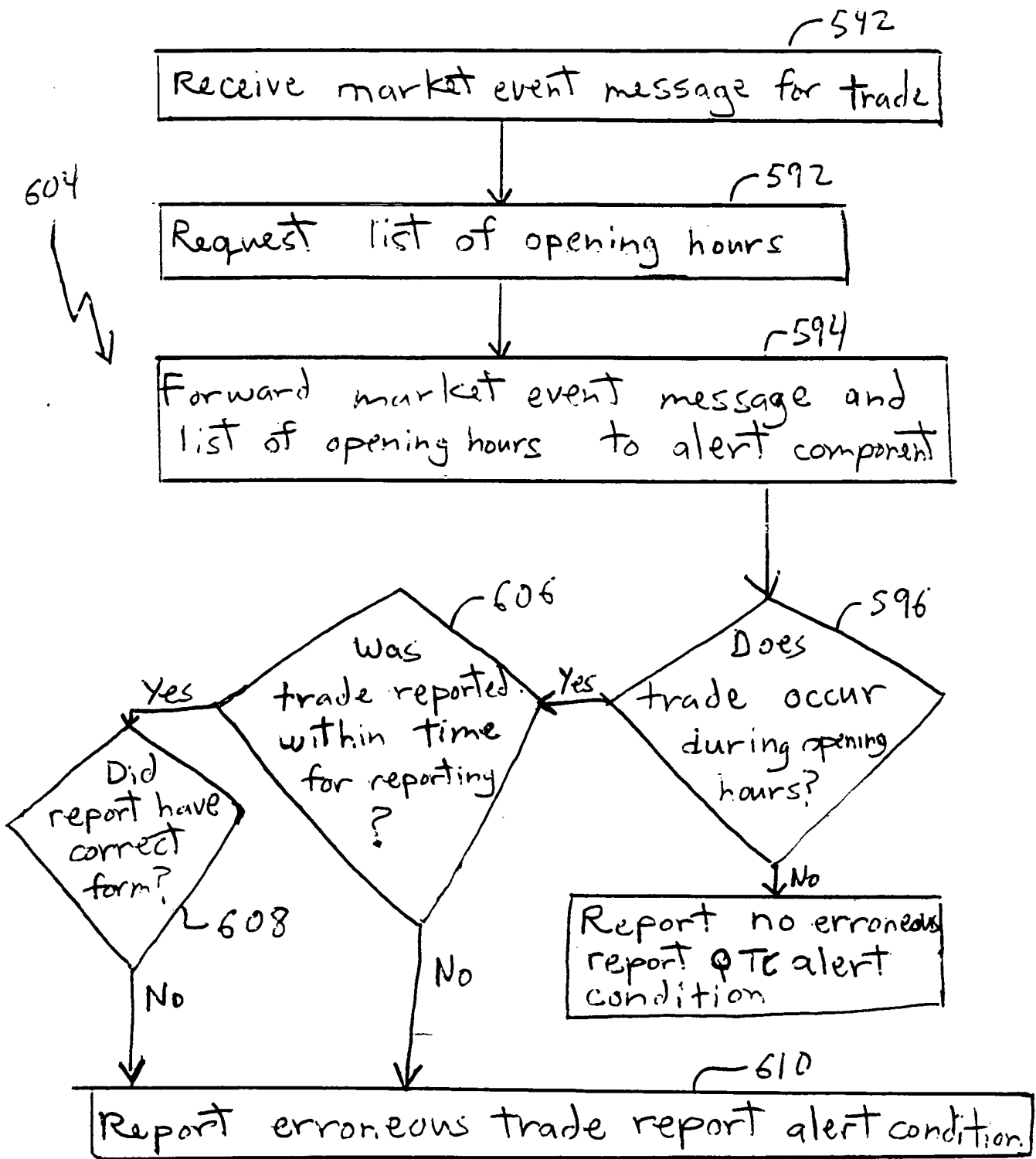


FIG. 34

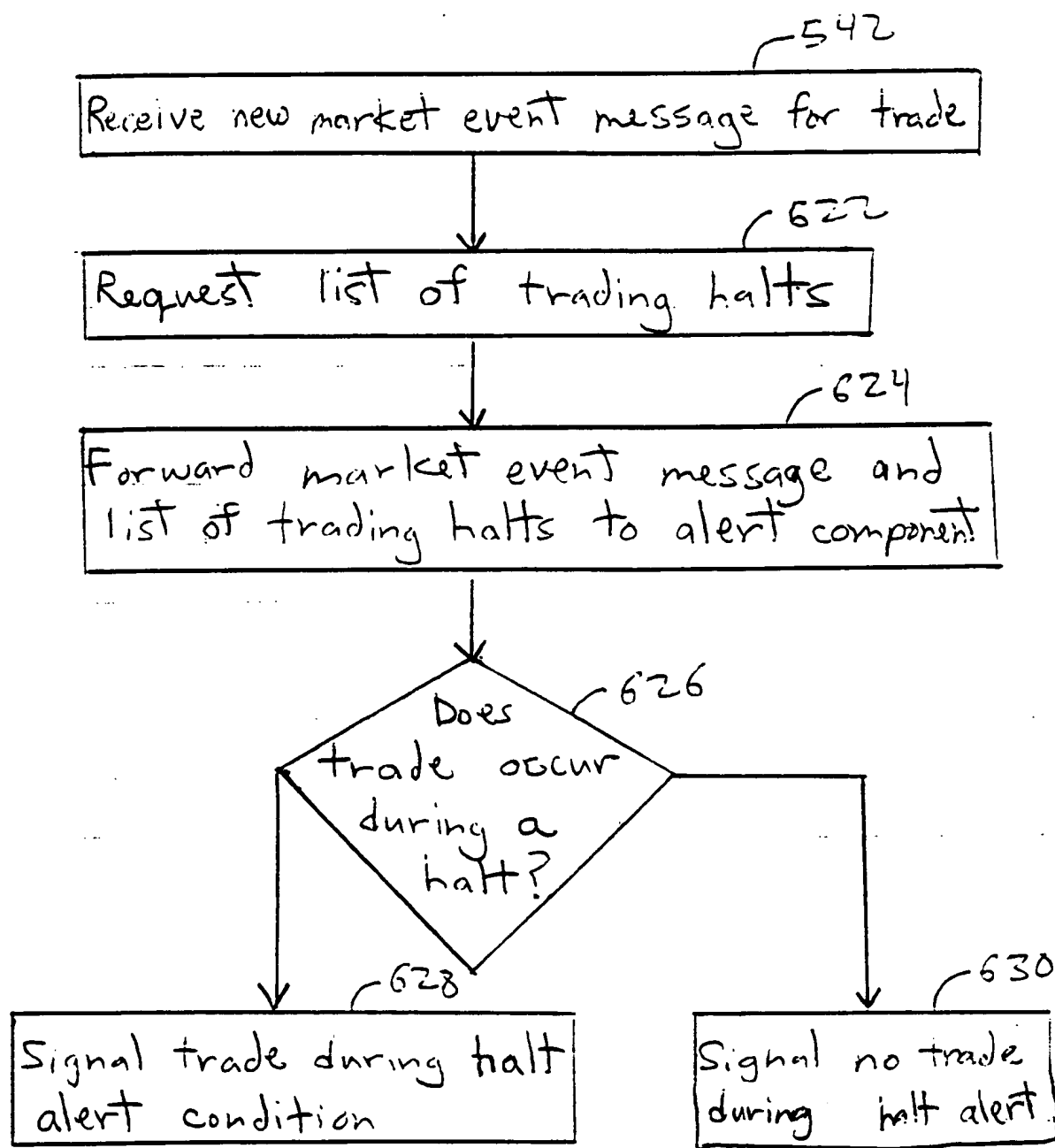
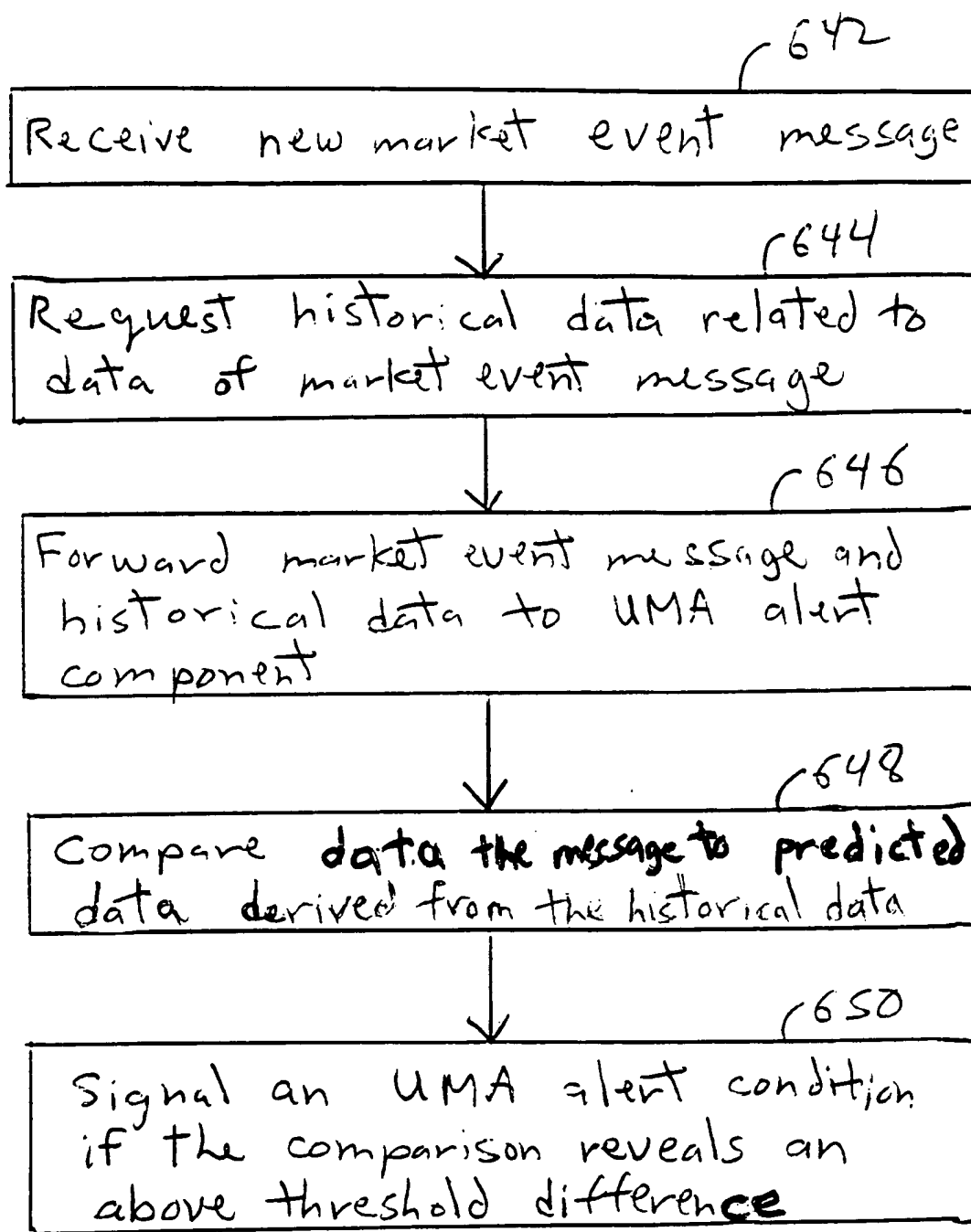


FIG. 35

640 642 644 646 648 650



640

FIG. 36

FIG. 37

NASDAQ SDR - Workstation

Query: Workstation Selling

Main Alert Pools

Time	Type	Symbol	Insd Bid	Insd Ask	Vol
15:31:07	L	GOLF	32 3/8	32 3/8	H
15:31:02	C	SCCB	27 3/8	27 1/8	
15:30:57	L	KIDD	56 3/8	56 3/8	
15:30:52	C	FSFB	66 3/8	66 1/8	
15:30:47	C	FSFB	66 3/8	66 1/8	

QT

Time	Type	Symbol	Insd Bid	Insd Ask	Pid
15:31:03	L-3W	SCCB	87 3/16	87 5/16	
15:30:56	H-R	SNET	32 1/8	32 3/8	H
15:30:49	H-W	INIA	57 1/8	25 7/8	

UMA

Time	Type	Symbol	Insd Bid	Insd Ask	Pid
15:31:02	VOL	YELL	32 3/8	32 3/8	L.V.
15:30:52	52H	OATS	25 1/3	25 7/8	C

Halts

Time	Type	Symbol	Market	Chdnl
------	------	--------	--------	-------

Alert Query Results

Quote Date	Symbol	Temp Symb	Watched
------------	--------	-----------	---------

News Query Results

Date	Time	ID	Headline	Symb
------	------	----	----------	------

Analyst Alert Pool

Time	Type	Symbol	Insd Bid	Insd Ask	RAI	Resolution
08:31:04	C	MSFT	103 5/8	103 1/2	Bill	
08:37:33	L	INTC	98 1/16	98 1/16		Referred to ...
08:31:04	C	CIBN	34 5/8	34 1/2		Contacted F...
08:37:33	L	SBAS	76 1/16	76 1/16		

Analyst Clusters

Cluster: Banking Sector

R Fed Funds

N 7/30/98 12:00:00pm DJ: Fed Raises Fed Funds Rate

Spoke with Greenspan

A 7/30/98 12:01:10pm Locked: CITI

News Query Results

Date	Time	ID	Headline	Symb
------	------	----	----------	------

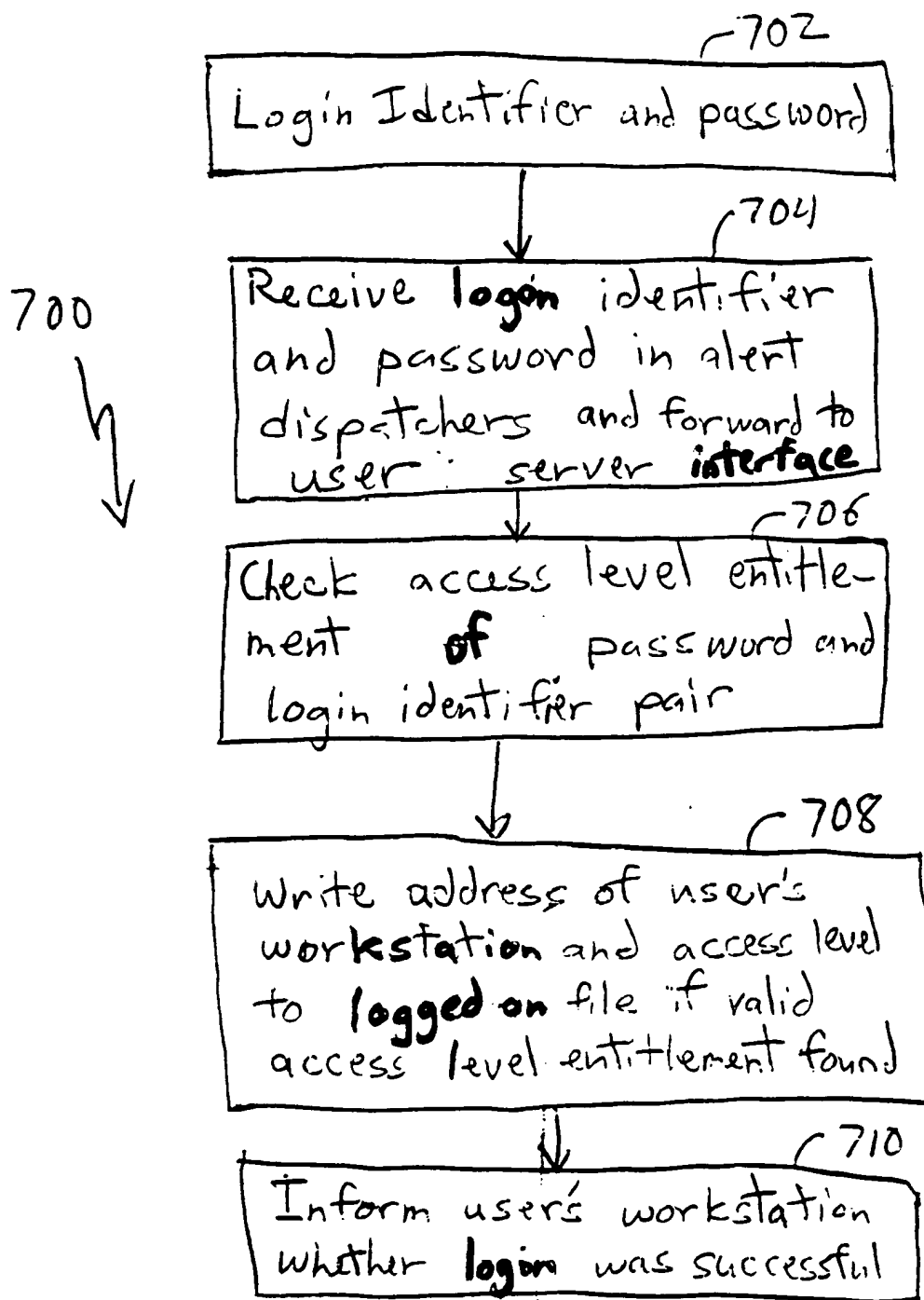


FIG. 39

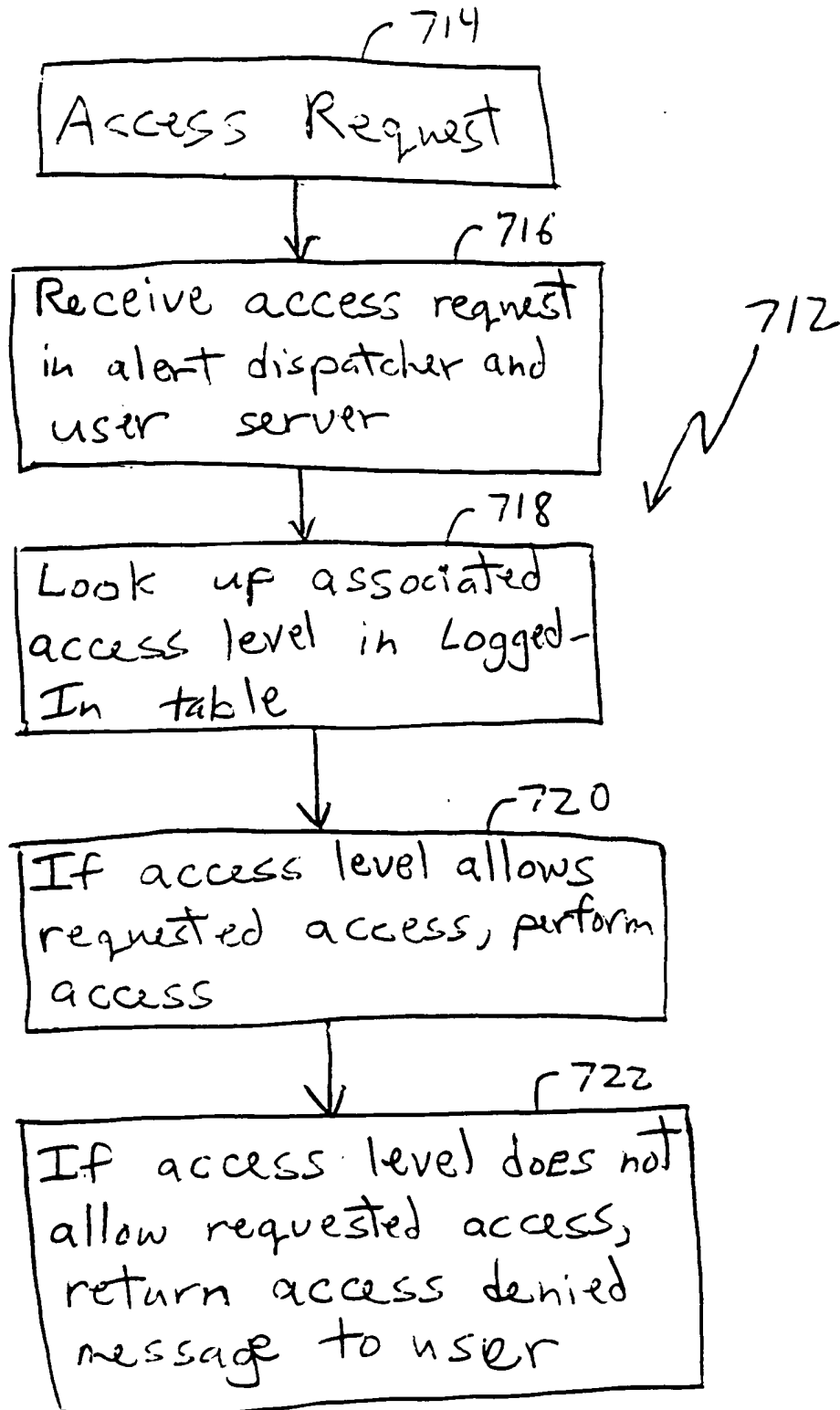
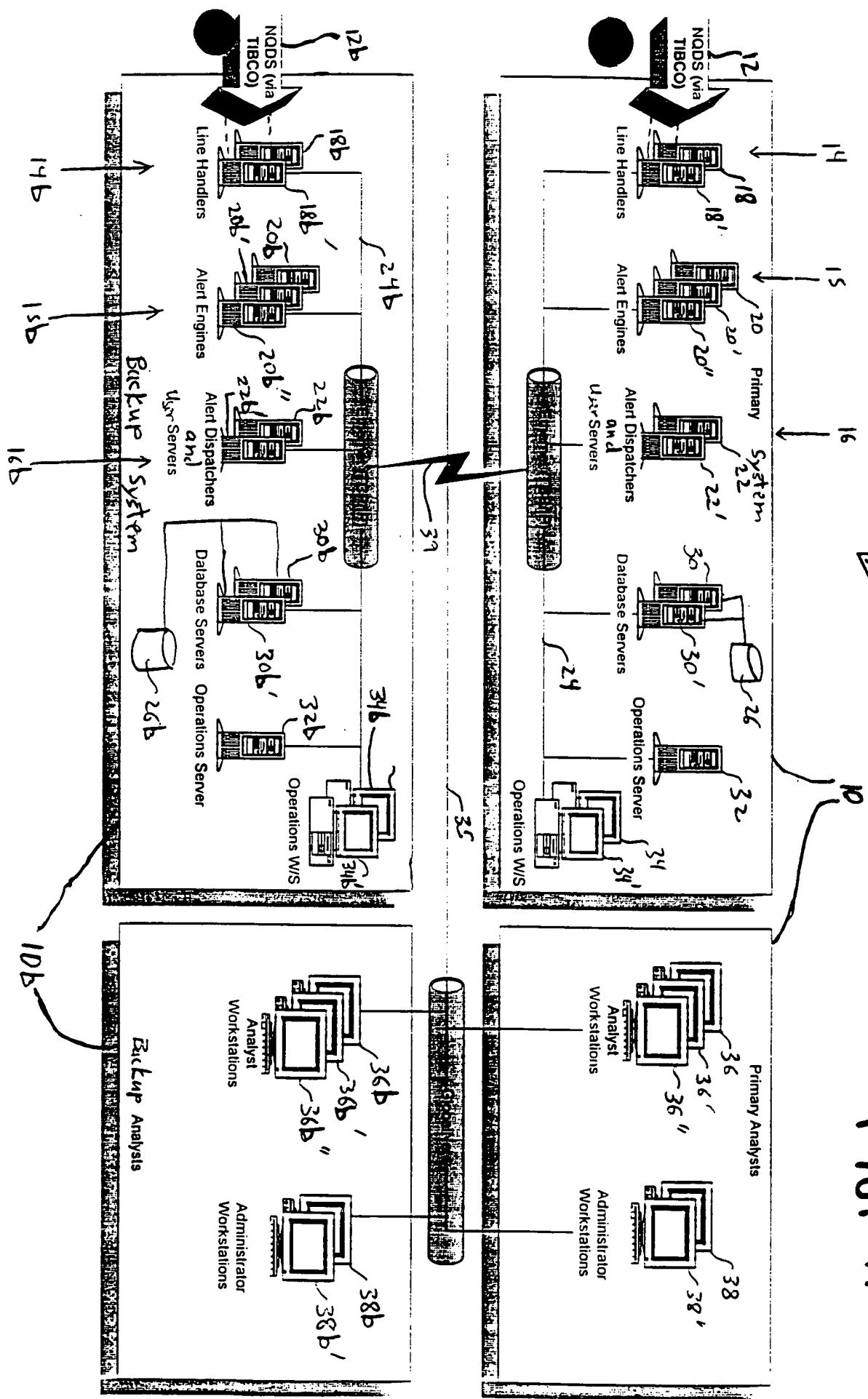


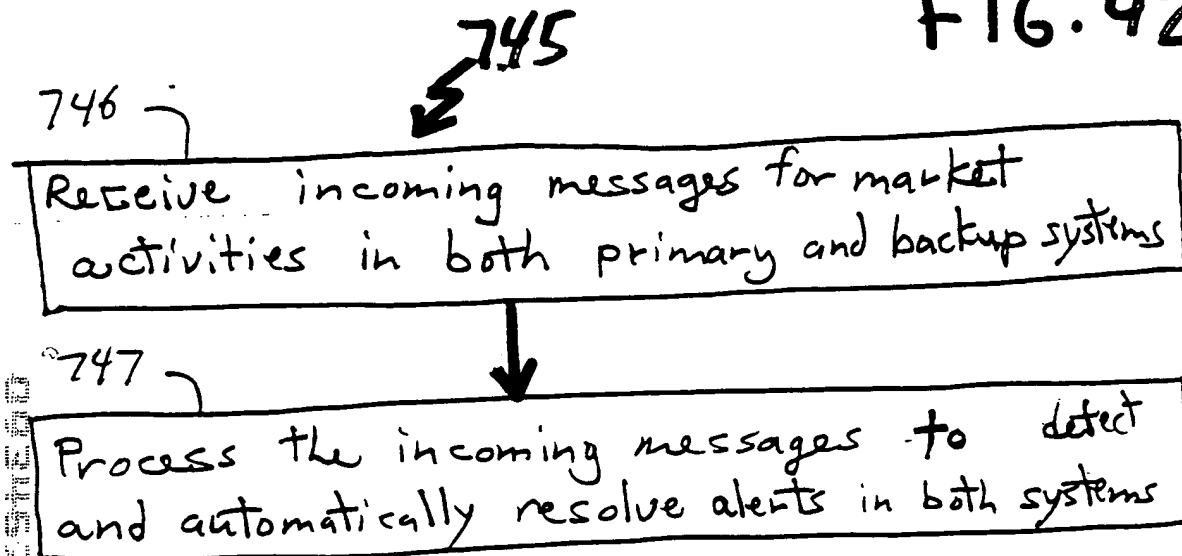
FIG. 40

F16. 41



00246749-00000

FIG. 42A



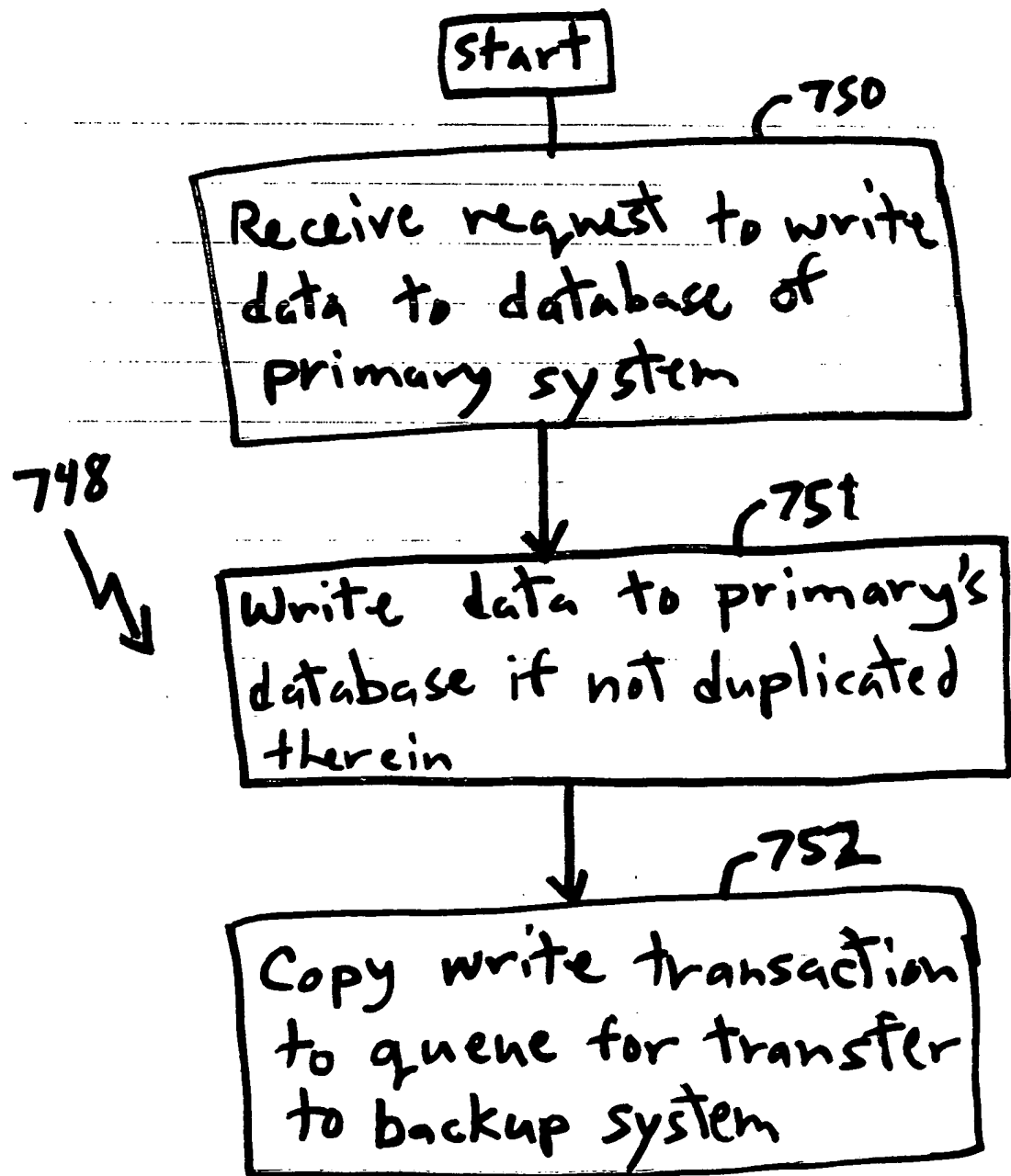


FIG. 42B

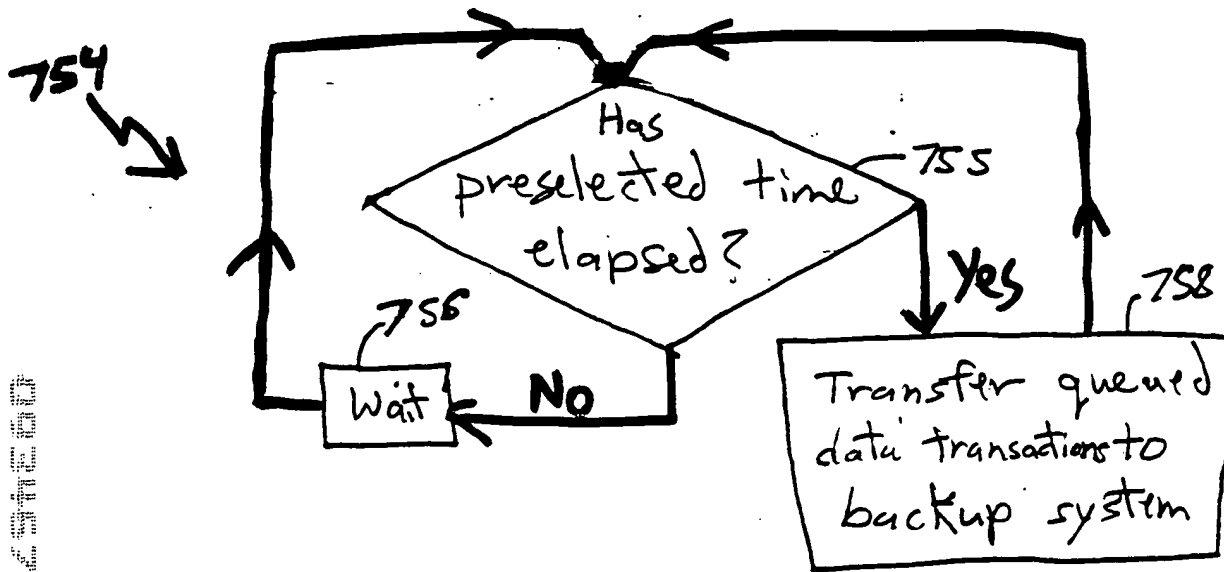


FIG. 42C

6600-0729760

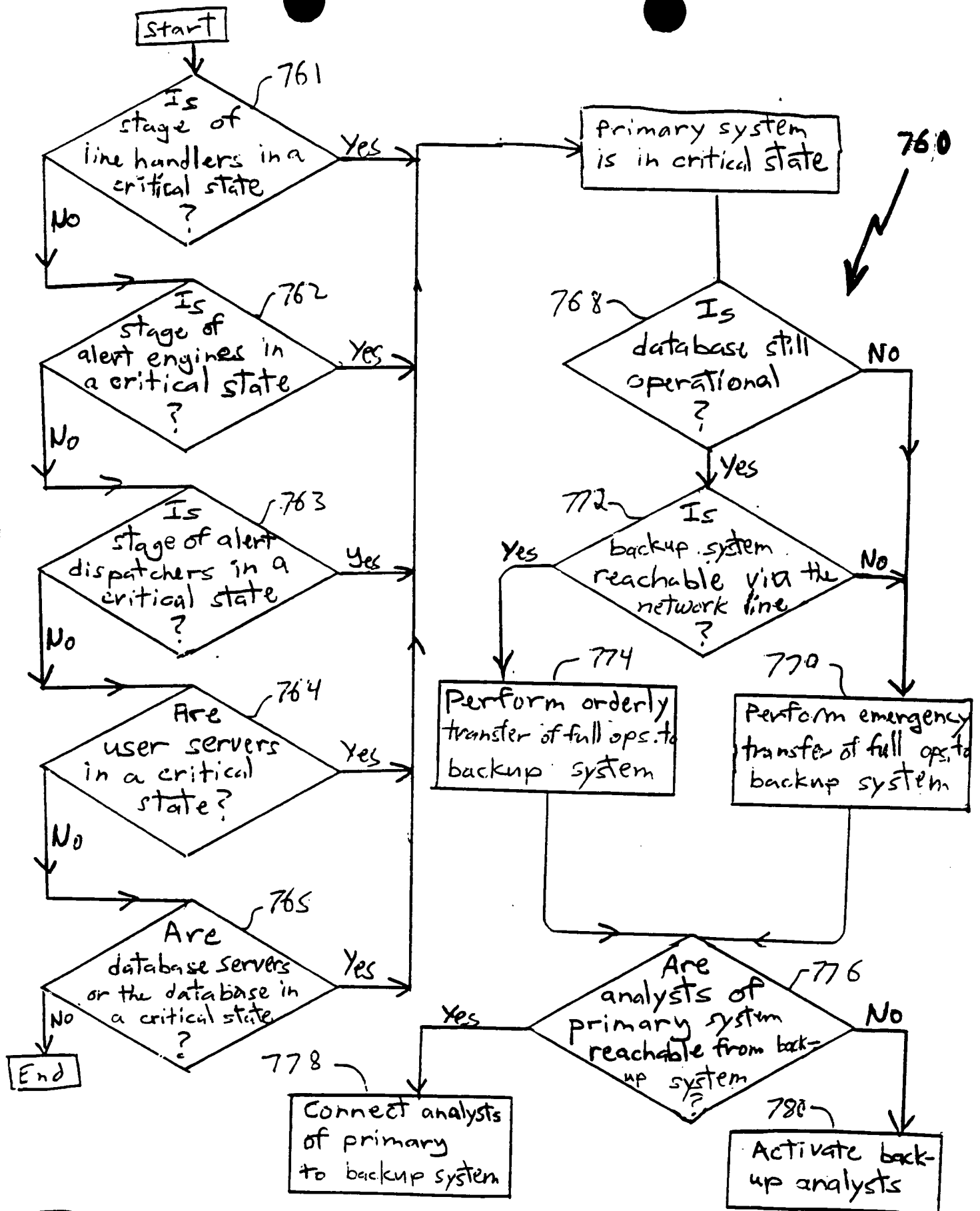


FIG. 43

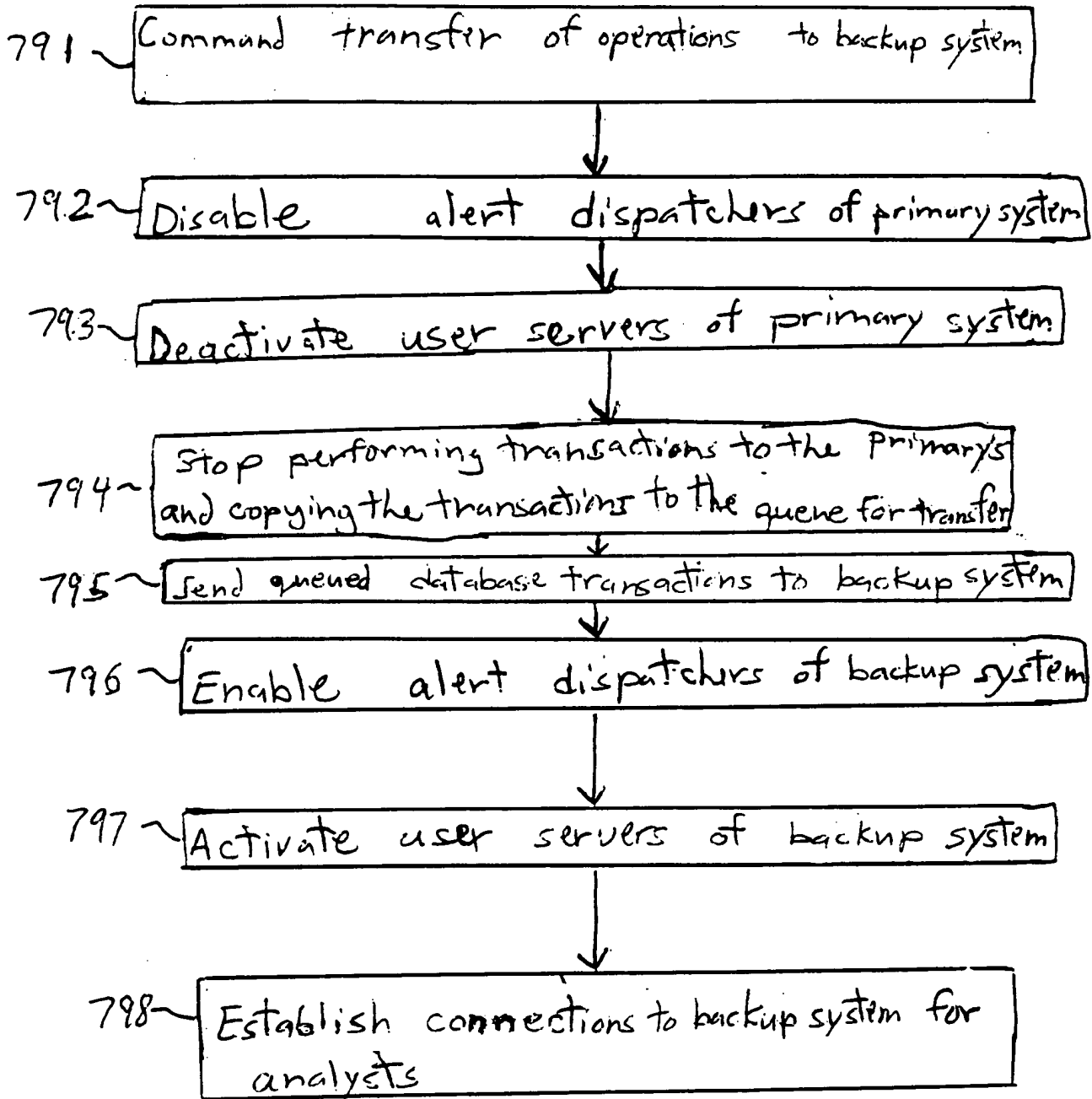
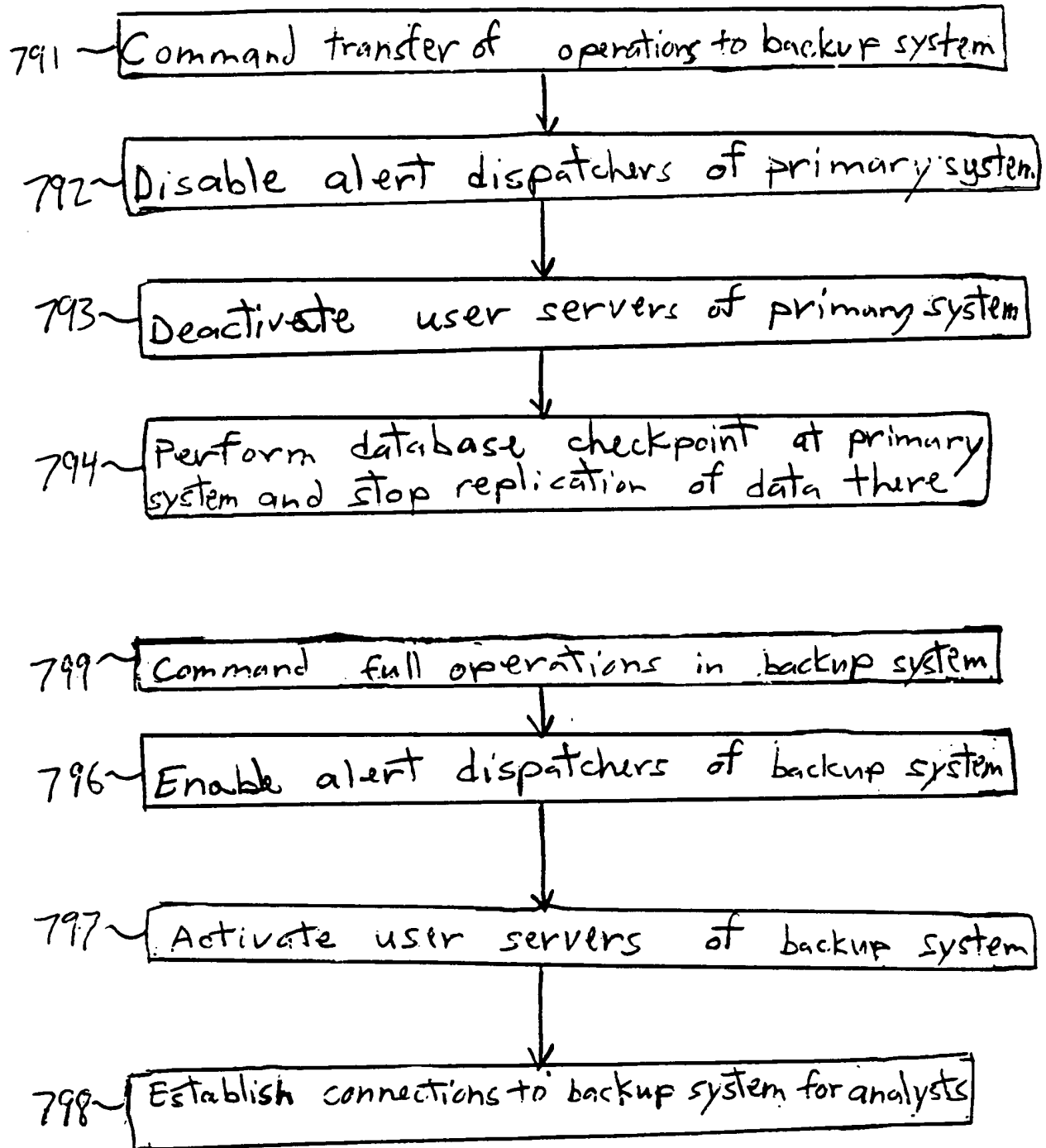


FIG. 44

790



800

FIG. 45



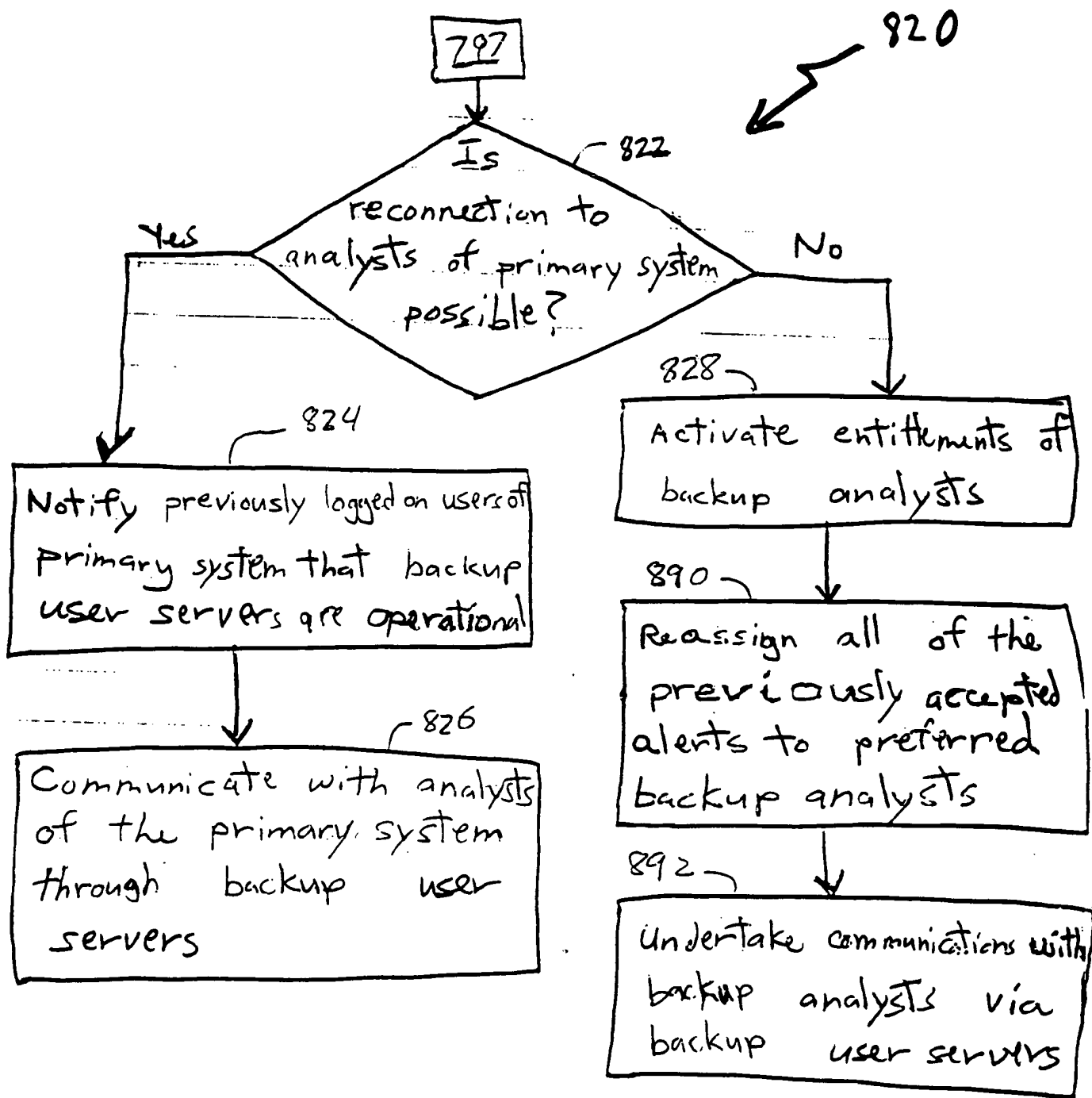


FIG. 47

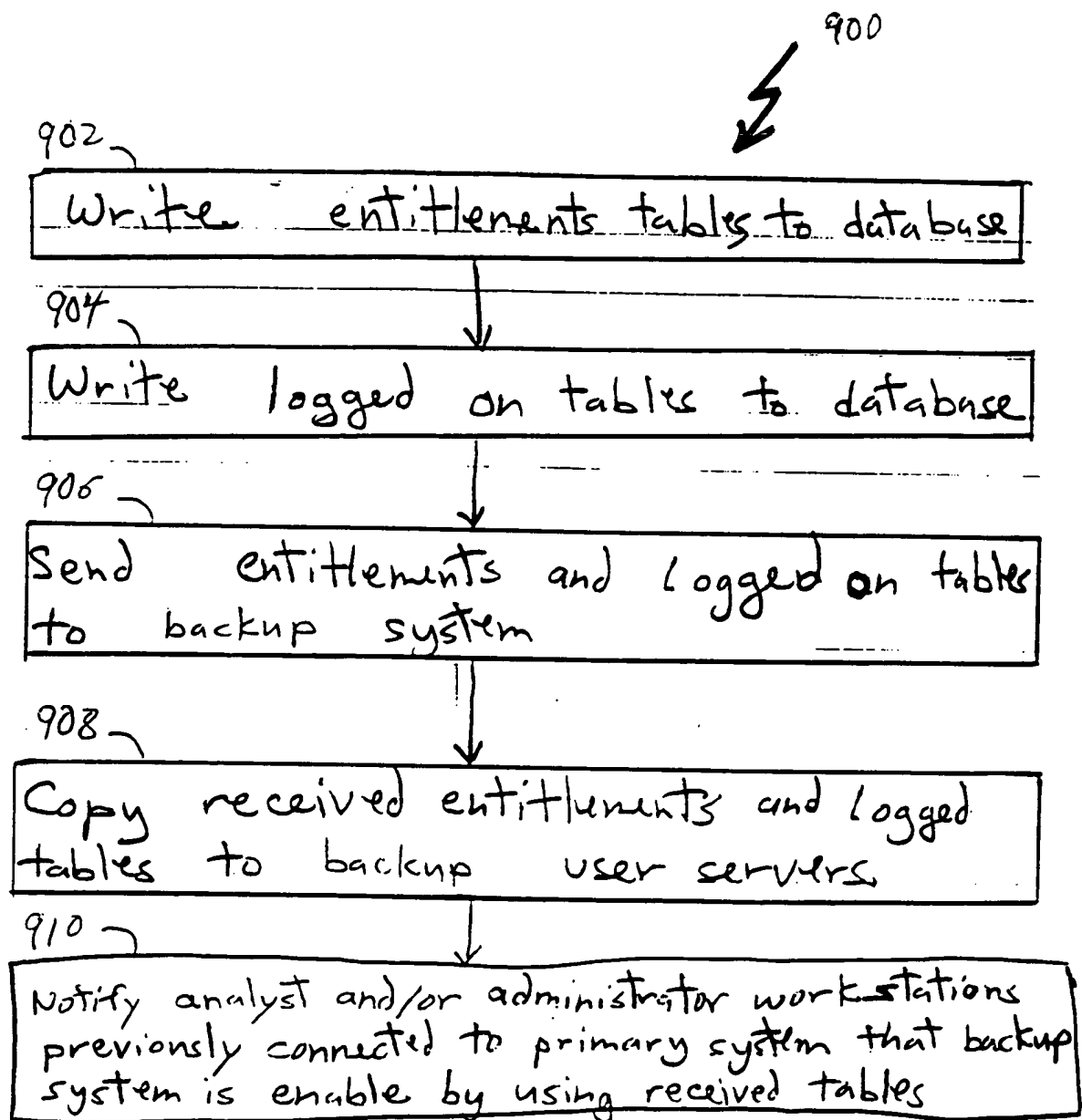


FIG. 48